INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: November 7, 2013

RE: Dave O'Mara Contractor Plant 0233 / 105 - 33049 - 05234

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot 6/13/13

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Commissioner

November 7, 2013

Ms. Amy Boswell, Vice President
Dave O'Mara Contractor, Inc.
1100 East O & M Avenue
North Vernon, IN 47265

Re: 105-33049-05234
Second Significant Revision to
F105-21451-05234

Dear Ms. Boswell:

Dave O'Mara Contractor Plant 0233 was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F119-21451-05234 on March 3, 2006 for a portable drum hot mix asphalt plant currently located at 1110 North Oard Road, Bloomington, Indiana, in Monroe County. On April 4, 2013, the Office of Air Quality (OAQ) received an application from the source requesting the addition of onsite reclaimed asphalt pavement (RAP) crushing and certified asbestos-free recycled asphalt shingles (RAS) grinding. The RAP crushing and RAS grinding will be performed by a portable unit that will be moved to the site on an as-needed basis. Dave O'Mara has also requested approval to add propane as a back-up fuel in the aggregate dryer, construct two (2) new screen decks and one (1) new 16,195 gallon asphalt emulsion storage tank, and increase its certified asbestos-free RAS storage capacity. Each of these changes is intended to increase the operational flexibility of this portable source. Furthermore, Dave O'Mara has indicated that it no longer wishes to have approval to relocate to LaPorte County due to additional requirements specific to the county. Finally, Dave O'Mara has requested the permit be updated to correct several emission unit descriptions to reflect actual operating conditions. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
   The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
   Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Ms. Hannah Desrosiers, of my staff, at (317) 233-9327 or toll free at 1-800-451-6027 extension 3-9327.

Sincerely,

Nathan C. Bell, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Documents, and revised permit and attachments.

NCB/hd

cc: File - Monroe County
Monroe County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch

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Commissioner

Federally Enforceable State Operating Permit (FESOP) Renewal
OFFICE OF AIR QUALITY

Dave O'Mara Contractor Plant 0233
Portable

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F119-21451-05234	
Original signed by: Paul Dubenetzky, Assistant Commissioner Office of Air Quality	Issuance Date: March 3, 2006 Expiration Date: March 3, 2016

First Relocation No.: 109-24419-05234	Issued: March 27, 2007
First Administrative Amendment No.: 109-25676-05234	Issued: January 22, 2008
Second Relocation No.: 083-26117-05234	Issued: March 6, 2008
Second Administrative Amendment No.: 109-27602-05234	Issued: March 18, 2009
Third Relocation No.: 105-27747-05234	Issued: April 17, 2009
Third Relocation Revocation No.: 105-28201-05234	Issued: July 14, 2009
Fourth Relocation No.: 145-28348-05234	Issued: September 3, 2009
Fifth Relocation No.: 105-28882-05234	Issued: February 15, 2010
Significant Permit Revision No.: 105-29731-05234	Issued: January 13, 2011
Third Administrative Amendment No.: 105-30998-05234	Issued: November 14, 2011

Second Significant Permit Revision No.: 105-33049-05234	
Issued by: Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 7, 2013 Expiration Date: March 3, 2016

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a portable hot drum-mix asphalt plant and cold-mix asphalt production operation. Electric arc furnace steel mill slag (steel slag) and asbestos-free recycled asphalt shingles (RAS) are included in the aggregate mix. Recycled asphalt pavement (RAP) is crushed and certified asbestos-free recycled asphalt shingles (RAS) are ground on-site. This source does not process blast furnace slag.

Source Address:	Portable
General Source Phone Number:	(812) 346-4135
SIC Code:	2951
County Location:	Portable (initially Owen)
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This portable source consists of the following emission units and pollution control devices:

(a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 400 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 104.0 million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, residual No. 4 fuel oil or propane, including steel slag and certified asbestos-free factory second shingles in the aggregate mix, using one (1) baghouse for particulate control, and exhausting to stack SV1.

(b) Material handling and conveying operations, consisting of the following:

(1) Aggregate storage piles consisting of sand, limestone, recycled asphalt pavement (RAP), gravel, steel slag, and certified asbestos-free factory second shingles.

(2) Three (3) hot mix asphalt storage silos, with a maximum capacity of 300 tons, each.

(3) Nine (9) cold feed bins, with a maximum capacity of 30 tons, each.

(4) Two (2) recycled asphalt pavement (RAP) feed bins, with a maximum capacity of 20 tons, each.

(5) Two (2) recycle transfer conveyors.

(6) Two (2) virgin aggregate collecting conveyors.

(7) Three (3) virgin aggregate transfer conveyors.

(8) One (1) virgin aggregate, two (2) product screen deck, approved for construction in 2013; and

(9) One (1) recycle materials, two (2) product screen deck, approved for construction in 2013;

Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.

(c) One (1) 335 horsepower, diesel fuel-fired portable RAP crusher for processing reclaimed asphalt pavement (RAP), identified as Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour, and including:

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(1) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres.

(d) Cold-mix cutback asphalt production and storage piles, approved for construction in 2010.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This portable source also includes the following insignificant activities:

(a) Two (2) hot oil heaters, approved for construction in 2010, with a maximum heat input capacity of 1.0 MMBtu per hour, each, firing natural gas or No. 2 fuel oil.

(b) Two (2) liquid asphalt storage tanks, identified as G-0233 and A-02333, constructed in 2010, with a maximum capacity of 30,000 gallons, each.

(c) One (1) liquid asphalt storage tank, identified as E-0233, approved for construction in 2011, with a maximum capacity of 12,000 gallons.

(d) One (1) No. 4 fuel oil storage tank, identified as U-0233, constructed in 2010, with a maximum capacity of 27,000 gallons.

(e) One (1) No. 2 fuel oil storage tank, identified as F-0233, constructed in 2010, with a maximum capacity of 10,000 gallons.

(f) One (1) 16,195 gallon asphalt emulsion storage tank, identified as AET-0233, approved for construction in 2013.

(g) Paved and unpaved roads and parking lots with public access.

A.4 FESOP Applicability [326 IAC 2-8-2]

This portable source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F119-21451-05234, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Southeast Regional Office and Southwest Regional Office, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.
Southwest Regional Office phone: (812) 380 2305; fax: (812) 380 2304.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to F119-21451-05234 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

(b) Emission Trades [326 IAC 2-8-15(b)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in any County except Lake or the areas specified in Conditions C.3(b)(1) through (7).

(b) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):

(1) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, Oak Park);

(2) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);

(3) Dubois County (Bainbridge Township - the City of Jasper);

(4) Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);

(5) St. Joseph County (the area north of Kern Road and east of Pine Road);

(6) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and

(7) Vigo County (Indiana State University campus, 0.5km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.

(c) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A.

C.8 Reserved

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least

thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

C.10 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.11 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports, and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application.

(1) Support information includes the following, where applicable:

(A) All calibration and maintenance records.

(B) All original strip chart recordings for continuous monitoring instrumentation.

(C) Copies of all reports required by the FESOP.

(2) Records of required monitoring information include the following, where applicable:

(A) The date, place, as defined in this permit, and time of sampling or measurements.

(B) The dates analyses were performed.

(C) The company or entity that performed the analyses.

(D) The analytical techniques or methods used.

(E) The results of such analyses.

(F) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Portable Source Requirement

C.20 Relocation of Portable Sources [326 IAC 2-14-4]

(a) This permit is approved for operation in all areas of Indiana, except in severe nonattainment areas for ozone, or in Lake, LaPorte, or Porter Counties. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.

(b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:

(1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1

(2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8

(3) The new location address of the portable source.

(4) Whether or not this portable source will be relocated to another source.

(5) If relocating to another source:

(A) Name, location address, and permit number of the source this portable source is relocating to.

(B) Whether or not the sources will be considered as one source. See Non Rule Policy (NRP) Air-005 and Air-006.

(6) If the sources will be considered as one source, whether or not the source to be relocated to has received the necessary approvals from IDEM to allow the relocation.

The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) A “Relocation Site Approval” letter shall be obtained prior to relocating.

(d) A valid operation permit consists of this document and any subsequent “Relocation Site Approval” letter specifying the current location of the portable plant.

Stratospheric Ozone Protection

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Portable Drum-Mix Asphalt Plant

(a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 400 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 104.0 million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, residual No. 4 fuel oil, or propane, including steel slag and certified asbestos-free factory second shingles in the aggregate mix, using one (1) baghouse for particulate control, and exhausting to stack SV1.

(b) Material handling and conveying operations, consisting of the following:

(1) Aggregate storage piles consisting of sand, limestone, recycled asphalt pavement (RAP), gravel, steel slag, and certified asbestos-free factory second shingles.

(2) Three (3) hot mix asphalt storage silos, with a maximum capacity of 300 tons, each.

(3) Nine (9) cold feed bins, with a maximum capacity of 30 tons, each.

(4) Two (2) recycled asphalt pavement (RAP) feed bins, with a maximum capacity of 20 tons, each.

(5) Two (2) recycle transfer conveyors.

(6) Two (2) virgin aggregate collecting conveyors.

(7) Three (3) virgin aggregate transfer conveyors.

(8) One (1) virgin aggregate, two (2) product screen deck, approved for construction in 2013; and

(9) One (1) recycle materials, two (2) product screen deck, approved for construction in 2013.

Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.

(c) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour, and including:

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(1) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter (PM) [326 IAC 2-2]

(a) The asphalt production rate shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) PM emissions from the dryer/mixer shall not exceed 0.201 pounds per ton of asphalt produced.

When combined with the limited potential to emit PM from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

D.1.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2][326 IAC 2-3] [326 IAC 8-1-6]

Pursuant to 326 IAC 2-8-4, and in order to render the requirements of 326 IAC 2-7, 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:

(a) The asphalt production rate shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) PM10 emissions from the dryer/mixer shall not exceed 0.115 pounds per ton of asphalt produced.

(c) PM2.5 emissions from the dryer/mixer shall not exceed 0.175 pounds per ton of asphalt produced.

(d) CO emissions from the dryer/mixer shall not exceed 0.13 pounds per ton of asphalt produced.

(e) VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt produced.

When combined with the limited potential to emit PM10, PM2.5, CO, and VOC from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of PM10, PM2.5, CO, and VOC to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset), not applicable.

In addition, compliance with these limits shall limit the VOC emissions from the dryer/mixer to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

D.1.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the dryer/mixer, any systems for crushing, conveying, handling, screening, weighing, and/or storing materials such as aggregate, reclaimed asphalt pavement, recycled asphalt shingles, mineral filler, and asphalt concrete, and the loading, transfer, and storage systems associated with emission control systems, shall not exceed 0.03 grain per dry standard cubic foot of exhaust air when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

D.1.4 Fuel and Slag Limits [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3]

Pursuant to 326 IAC 2-8-4, and in order to render the requirements of 326 IAC 2-7, 326 IAC 2-2, and 326 IAC 2-3 not applicable, the Permittee shall comply with the following:

(a) Slag Usage Limitation

Steel slag usage shall not exceed 150,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Slag and Fuel Specifications

(1) SO2 emissions from the usage of steel slag in the dryer/mixer shall not exceed 0.0014 pounds of SO2 per ton of steel slag processed.

(2) The thirty (30) day calendar month average sulfur content of the steel slag shall not exceed 0.66 percent by weight, with compliance determined at the end of each month.

(3) When combusting No. 2 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent by weight, with compliance determined at the end of each month.

(4) When combusting No. 4 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 4 fuel oil shall not exceed 1.60 percent by weight, with compliance determined at the end of each month.

(c) Single Fuel Usage Limitations

When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner the usage of fuel shall be limited as follows:

(1) Natural gas usage shall not exceed 911 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) No. 2 fuel oil usage shall not exceed 2,660,632 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) No. 4 fuel oil usage shall not exceed 787,104 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) Propane usage shall not exceed 10,066,740 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Multiple Fuel & Slag Usage Limitations

When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and in conjunction with the use of steel slag in the aggregate mix, emissions from the dryer/mixer shall be limited as follows:

(1) SO2 emissions from the dryer/mixer shall not exceed 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) NOx emissions from the dryer/mixer shall not exceed 86.55 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

When combined with the limited potential to emit SO2 and NOx from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of SO2 and NOx to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.5 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the Permittee shall comply with the following:

(a) The SO2 emissions from the dryer/mixer burner shall not exceed five tenths (0.5) pounds per million British thermal unit heat input when operating on distillate oil.

(b) The SO2 emissions from the dryer/mixer burner shall not exceed one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on residual oil.

(c) Pursuant to 326 IAC 7-2-1, compliance shall be determined on a calendar month average.

D.1.6 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4][326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, and in order to render the requirements of 326 IAC 2-7 and 326 IAC 2-4.1 not applicable, the Permittee shall only grind and process certified asbestos-free factory second and/or post consumer waste shingles as an additive in its aggregate mix.

Compliance with these limits, combined with the limited PTE HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than 10 tons per 12 consecutive month period, and any combination of HAPs to less than 25 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

D.1.7 Particulate Emission Limits [326 IAC 6-3]

When not located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County, pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the portable RAP crusher shall not exceed 58.51 pounds per hour when operating at a process weight rate of 200 tons (or 400,000 pounds) per hour. The pound per hour limitation was calculated as follows:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The Permittee shall use wet suppression at all times the crusher, and any associated screens and/or conveyors, are in operation in order to comply with this limit.

D.1.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for aggregate dryer and drum mixer and their control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.9 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.1.1(b) - Particulate Matter (PM), the Permittee shall perform PM testing of the dryer/mixer at least once every five (5) years from the date of the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

(b) In order to demonstrate compliance with Conditions D.1.2(b) and D.1.2(c) - FESOP Limits, the Permittee shall perform PM10 and PM2.5 testing on the dryer/mixer not later than 180 days after final promulgation of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 or no later than five (5) years after the date of the most recent valid compliance demonstration, whichever is later. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. This testing shall be conducted utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

D.1.10 Sulfur Dioxide Emissions and Sulfur Content

(a) Compliance with the steel slag limitation established in Conditions D.1.4(b)(1) and D.1.4(b)(2) - Fuel and Slag Limits shall be determined utilizing one of the following options.

(1) Providing vendor analysis of the steel slag delivered, if accompanied by a vendor certification; or

(2) Analyzing a sample of the slag delivery to determine the sulfur content of the steel slag, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

(3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 MMBtu per hour burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

(b) Compliance with the fuel limitations established in Conditions D.1.4(b)(3), (4), and (5) - Fuel and Slag Limits and D.1.5(a) and (b) Sulfur Dioxide (SO_2) shall be determined utilizing one of the following options.

(1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed 0.5 pounds per million British thermal units heat input when combusting No. 2 distillate fuel oil, or 1.6 pounds per million British thermal units heat input when combusting No. 4 residual fuel oil, by:

(A) Providing vendor analysis of heat content and sulfur content of the fuel delivered, if accompanied by a vendor certification; or

(B) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.

(i) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and

(ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 MMBtu per hour burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.11 Particulate Matter (PM, PM10, and PM2.5) Control

(a) In order to comply with Conditions D.1.1(b) - Particulate Matter (PM), D.1.2(b) and (c) - FESOP Limits, and D.1.3 - Particulate, the baghouse for the dryer/mixer shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.12 Multiple Fuel & Slag Usage / Sulfur Dioxide (SO2) and Nitrogen Oxide (NOx) Emissions

(a) In order to determine compliance with Condition D.1.4(d)(1) - Fuel and Slag Limits, when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and in conjunction with the use of steel slag in the aggregate mix, the Permittee shall use the following equation to determine the tons of SO2 emitted per twelve (12) consecutive month period:

(1) Sulfur Dioxide emission calculation

$$S = \frac{F(E_F) + R(E_R) + G(E_G) + P(E_P) + L(E_L)}{2000 \text{ lbs/ton}}$$

Where:

S = tons of sulfur dioxide emissions for twelve (12) month consecutive period

F = gallons of No. 2 fuel oil used in last twelve (12) months

R = gallons of No. 4 fuel oil used in last twelve (12) months

G = million cubic feet of natural gas used in last twelve (12) months

P = gallons of propane used in the dryer/mixer in last twelve (12) months

L = tons of steel slag used in last twelve (12) months with less than or equal to sixty-six hundredths percent (0.66%) sulfur content

Emission Factors:

E_F = 0.071 pounds per gallon of No. 2 fuel oil

E_R = 0.075 pounds per gallon of No. 4 fuel oil

E_G = 0.6 pounds per million cubic feet of natural gas

E_P = 0.00002 pounds per gallon of propane

E_L = 0.0014 pounds per ton of steel slag processed

(b) In order to determine compliance with Condition D.1.4(d)(2) - Fuel and Slag Limits, when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the Permittee shall use the following equation to determine the tons of NOx emitted per twelve (12) consecutive month period:

(1) Nitrogen Oxide emission calculation

$$N = \frac{F(E_F) + R(E_R) + G(E_G) + P(E_P)}{2000 \text{ lbs/ton}}$$

Where:

N = tons of nitrogen oxide emissions for twelve (12) month consecutive period

F = gallons of No. 2 fuel oil used in last twelve (12) months

R = gallons of No. 4 fuel oil used in last twelve (12) months

G = million cubic feet of natural gas used in last twelve (12) months

P = gallons of propane used in the dryer/mixer in last twelve (12) months

Emission Factors:

E_F = 0.024 pounds per gallon of No. 2 fuel oil

E_R = 0.047 pounds per gallon of No. 4 fuel oil

E_G = 190 pounds per million cubic feet of natural gas

E_P = 0.013 pounds per gallon of propane

D.1.13 Asbestos Content

Compliance with Condition D.1.6(c) - Hazardous Air Pollutants (HAPs) shall be determined utilizing one of the following options:

(a) Providing shingle supplier certification that the factory second shingles do not contain asbestos; or

(b) Analyzing a sample of the factory second shingles delivery to determine the asbestos content of the factory second shingles, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.1.14 Visible Emissions Notations

(a) Visible emission notations of the conveyors, material transfer points and aggregate dryer/ mixer stack (SV1) exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation

with regard to the reasonable response steps required by this condition. An abnormal visible emission notation is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.15 Baghouse Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer and drum mixer at least once per day when the aggregate dryer and drum mixer are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 3.0 and 5.0 inches of water, unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.1.16 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.17 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1(a) - Particulate Matter (PM) and D.1.2(a) - FESOP Limits, the Permittee shall maintain records of the amount of asphalt produced per month. Records necessary to demonstrate compliance shall be available no later than thirty (30) days after the end of each compliance period.

(b) To document the compliance status with Conditions D.1.4(a), D.1.4(b), and D.1.4(d) - Fuel and Slag (SO_2) Limits, the Permittee shall maintain records in accordance with (1) through (4) below. Records necessary to demonstrate compliance shall be available no later than 30 days after the end of each compliance period.

(1) Calendar dates covered in the compliance determination period;

(2) Actual steel slag usage and sulfur content for all steel slag used at the source since the last compliance determination period;

(3) A certification, signed by the owner or operator, that the records of the steel slag supplier certifications represent all of the steel slag used during the period; and

(4) If the steel slag supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(i) Steel slag supplier certifications;

(ii) The name of the steel slag supplier; and

(iii) A statement from the steel slag supplier that certifies the sulfur content of the steel slag.

(c) To document the compliance status with Conditions D.1.4 - Fuel and Slag Limits and D.1.5 - Sulfur Dioxide (SO_2), the Permittee shall maintain records in accordance with (1) through (4) below. Records necessary to determine compliance shall be available no later than 30 days after the end of each compliance period.

(1) Calendar dates covered in the compliance determination period;

(2) Calendar month average sulfur content, heat content, fuel usage, and equivalent sulfur dioxide and nitrogen oxide emission rates for each fuel used at the source since the last compliance determination period;

(3) A certification, signed by the owner or operator, that the records of the fuel oil supplier certifications represent all of the fuel combusted during the period; and

(4) If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(i) The name of the fuel supplier; and

(ii) A statement from the fuel supplier that certifies the sulfur content of the No. 2 fuel oil, and No. 4 fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(d) To document the compliance status with Condition D.1.6 - Hazardous Air Pollutants (HAPs), the Permittee shall maintain records in accordance with (1) and (2) below. Records necessary to determine compliance shall be available no later than 30 days after the end of each compliance period.

(1) A certification, signed by the owner or operator, that the records of the shingle supplier certifications represent all of the shingles used during the period; and

(2) If the shingle supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(i) Shingle supplier certifications;

(ii) The name of the shingle supplier(s); and

(iii) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.

(e) To document the compliance status with Condition D.1.14 - Visible Emission Notations, the Permittee shall maintain records of the daily visible emission notations of the conveyors, material transfer points, and, the dryer/burner stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (i.e., the process did not operate that day).

(f) To document the compliance status with Condition D.1.15 - Parametric Monitoring, the Permittee shall maintain records of the once per day pressure drop and the inlet baghouse temperature readings during normal operation. The Permittee shall include in its daily record when the pressure drop and inlet baghouse temperature readings are not taken and the reason for the lack of a pressure drop and inlet baghouse temperature reading (e.g. the process did not operate that day).

(g) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.18 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1(a) - Particulate Matter (PM), D.1.2(a) - FESOP Limits, and D.1.4 - Fuel and Slag Limits shall be submitted no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(c) Cold-mix cutback asphalt production and storage piles, approved for construction in 2010.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 2-2] [326 IAC 2-8-4]

(a) Pursuant to 326 IAC 2-8-4, the VOC emissions from the sum of the binders shall not exceed 58.89 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:

(1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.

(2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.

(3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.

(4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume

(5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating

(c) The liquid binder used in cold mix asphalt production shall be limited as follows:

(1) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed 62.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed 84.1 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed 235.5 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) The amount of VOC solvent used in emulsified asphalt shall not exceed 126.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) The amount of VOC solvent used in all other asphalt shall not exceed 2355.5 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(6) The VOC solvent allotments in (1) through (5) above shall be adjusted when more than one type of binder is used per twelve (12) consecutive month period with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment factor listed in the table that follows.

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$$

Type of binder	adjustment factor
cutback asphalt rapid cure	1.053
cutback asphalt medium cure	1.429
cutback asphalt slow cure	4.0
emulsified asphalt	2.155
other asphalt	40

When combined with the limited potential to emit VOC from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of VOC to less than 100 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

D.2.2 Volatile Organic Compound Rules for Asphalt Pavers [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2, Volatile Organic Compound Rules for Asphalt Pavers, the cutback asphalt or asphalt emulsions produced by the source shall not contain more than seven percent (7%) oil distillate by volume of emulsion as determined by ASTM D244-80a "Emulsific Asphalts" ASTM part 15, 1981 ASTM 1916 Race St., Philadelphia, PA 19103, Library of Congress Card Catalog #40-10712, for any paving application except as used for the following purposes:

(a) penetrating prime coating;

(b) stockpile storage;

(c) application during the months of November, December, January, February, and March.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1 - Volatile Organic Compounds (VOC) the Permittee shall record and maintain complete monthly records of the information listed in items (1) through (4) below:

(1) Calendar dates covered in the compliance determination period;

(2) Liquid asphalt binder usage in the production of cold mix asphalt since the last compliance determination period.

(3) VOC solvent content by weight of the liquid binder used in the production of cold mix asphalt since the last compliance determination period.

(4) Amount of VOC solvent used in the production of cold mix asphalt and the amount of VOC emitted since the last compliance determination period.

Records that may be used to document the information included in (1) through (4) may include: delivery tickets, manufacturer's data, material safety data sheets (MSDS), and other documents necessary to verify the type and amount used. Test results of ASTM tests for asphalt cutback and asphalt emulsion may be used to document volatilization.

(b) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.2.4 Reporting Requirements

A quarterly summary of the information to document compliance status with Condition D.2.1 - Volatile Organic Compounds (VOC) shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

Insignificant Activities

(a) Two (2) hot oil heaters, approved for construction in 2010, with a maximum heat input capacity of 1.0 MMBtu per hour, each, firing natural gas or No. 2 fuel oil.

(b) Two (2) liquid asphalt storage tanks, identified as G-0233 and A-02333, constructed in 2010, with a maximum capacity of 30,000 gallons, each.

(c) One (1) liquid asphalt storage tank, identified as E-0233, approved for construction in 2011, with a maximum capacity of 12,000 gallons.

(d) One (1) No. 4 fuel oil storage tank, identified as U-0233, constructed in 2010, with a maximum capacity of 27,000 gallons.

(e) One (1) No. 2 fuel oil storage tank, identified as F-0233, constructed in 2010, with a maximum capacity of 10,000 gallons.

(f) One (1) 16,195 gallon asphalt emulsion storage tank, identified as AET-0233, approved for construction in 2013.

(g) Paved and unpaved roads and parking lots with public access.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate Emissions [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4, the particulate emissions from each hot oil heater shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

D.3.2 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from each hot oil heater shall not exceed 0.03 grain per dry standard cubic foot of exhaust air when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

D.3.3 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for the storage tanks (G-0233, A-0233, F-0233, U-0233, and AET-0233) when the source is located in Clark or Floyd Counties:

(a) The vessel identification number.

(b) The vessel dimensions.

(c) The vessel capacity.

The Permittee shall keep all records as described in (a) through (c) for the life of the vessel.

SECTION E.1 NSPS REQUIREMENTS

Facility Description [326 IAC 2-8-4(10)]: Portable Drum-Mix Asphalt Plant

(a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 400 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 104.0 million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, residual No. 4 fuel oil, or propane, including steel slag and certified asbestos-free factory second shingles in the aggregate mix, using one (1) baghouse for particulate control, and exhausting to stack SV1.

(b) Material handling and conveying operations, consisting of the following:

(1) Aggregate storage piles consisting of sand, limestone, recycled asphalt pavement (RAP), gravel, steel slag, and certified asbestos-free factory second shingles.

(2) Three (3) hot mix asphalt storage silos, with a maximum capacity of 300 tons, each.

(3) Nine (9) cold feed bins, with a maximum capacity of 30 tons, each.

(4) Two (2) recycled asphalt pavement (RAP) feed bins, with a maximum capacity of 20 tons, each.

(5) Two (2) recycle transfer conveyors.

(6) Two (2) virgin aggregate collecting conveyors.

(7) Three (3) virgin aggregate transfer conveyors.

(8) One (1) virgin aggregate, two (2) product screen deck, approved for construction in 2013; and

(9) One (1) recycle materials, two (2) product screen deck, approved for construction in 2013.

Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]

E.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart I.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.1.2 New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart I (included as Attachment B of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart I:

(a) 40 CFR 60.90
(b) 40 CFR 60.91
(c) 40 CFR 60.92
(d) 40 CFR 60.93

SECTION E.2 NSPS REQUIREMENTS

Facility Description [326 IAC 2-8-4(10)]: Portable RAP Crusher

(c) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour, and including:

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(1) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart OOO.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.2.2 NSPS Subpart OOO Requirements - Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12-1]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included as Attachment C of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart OOO, for the RAP Crusher:

(1) 40 CFR 60.670(a), (d), (e), and (f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(b), (d), and (e)
(4) 40 CFR 60.673
(5) 40 CFR 60.674(b)
(6) 40 CFR 60.675(a), (c)(1)(i), (ii), (iii), (c)(3), (d), (e), (g), and (i)
(7) 40 CFR 60.676(a), (b)(1), (f), (h), (i), (j), and (k)
(8) Table 1 and Table 3

E.2.3 Testing Requirements [40 CFR Part 60, Subpart OOO] [326 IAC 12-1] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition E.2.2, the Permittee shall perform testing for fugitive emissions from affected facilities without water sprays, as required under NSPS 40 CFR 60, Subpart OOO, not later than five (5) years from the most recent valid compliance demonstration,

utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Note: Pursuant to §60.674(b)(1), affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.

SECTION E.3 NSPS & NESHAP REQUIREMENTS

Facility Description [326 IAC 2-8-4(10)]: Portable RAP Crusher

(k) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]

E.3.1 Nonroad Engines [326 IAC 12][40 CFR 60, Subpart IIII][326 IAC 20-82][40 CFR 63, Subpart ZZZZ] [40 CFR 1068.30]

In order to render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII, which are incorporated by reference as 326 IAC 12, and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), which are incorporated by reference as 326 IAC 20-82, not applicable, and to ensure the portable RAP crusher is a nonroad engine, as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), the Permittee shall comply with the following:

(a) The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

(b) Any portable RAP crusher that replaces a portable RAP crusher at a location and that is intended to perform the same or similar function as the portable RAP crusher replaced will be included in calculating the consecutive time period.

(c) For the purposes of this condition, and pursuant to 40 CFR 1069.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.

Compliance with these limits shall render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII) and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) not applicable.

E.3.2 Record Keeping Requirements

(a) To document the compliance status with Condition E.3.1(a), the Permittee shall maintain records of the dates of installation and removal of the portable RAP crusher as the unit is installed and removed.

(b) To document the compliance status with Condition E.3.1(b), the Permittee shall maintain records of the make, model, horsepower rating, manufacture date, and model year of each portable RAP crusher brought onto the site.

(c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

E.3.3 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions E.3.1(a) and E.3.1(b), shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1)by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119-21451-05234

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)_____

☐ Report (specify)_____

☐ Notification (specify)_____

☐ Affidavit (specify)_____

☐ Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Signature:
Printed Name:
Title/Position:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) EMERGENCY OCCURRENCE REPORT

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119-21451-05234

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119-21451-05234
Facility: One (1) aggregate dryer/mixer

Parameter: **Asphalt processed**

Limit: One million (1,000,000) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:_____

Month	**Asphalt processed (tons)**	**Asphalt processed (tons)**	**Asphalt processed (tons)**
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119-21451-05234
Facility: Dryer/Mixer

Parameter: **Steel Slag Usage**

Limit: Steel slag usage shall not exceed 150,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119-21451-05234
Facility: Dryer/mixer burner

Parameter: **Single fuel usage**

Limit: When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner the usage of fuel shall be limited as follows:

Fuel Type (units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet)	911
No. 2 fuel oil (gallons)	2,660,632
No. 4 fuel oil (gallons)	787,104
Propane (gallons)	10,066,740

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report
Page 1 of 2

Source Name:	Dave O'Mara Contractor Plant 0233
Source Address:	Portable
FESOP Permit No.:	F119-21451-05234
Facility:	Dryer/mixer
Parameter:	**SO2 and NOx emissions**
Limit:	*SO2 emissions* from the dryer/mixer shall not exceed 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(a)(1). *NOx emissions* from the dryer/mixer shall not exceed 86.55 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(b)(1).

FESOP Fuel Usage and SO2/NOx Emissions Quarterly Reporting Form **Page 2 of 2**

QUARTER: _____ YEAR: _____

Month	Fuel Types/Slag (units)	Column 1	Column 2	Column 1 + Column 2	Total SO2 Emissions From All Fuels Used and Slag (tons per 12 month consecutive period)	Total NOx Emissions From All Fuels Used (tons per 12 month consecutive period)
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total		
Month 1	Natural gas (mmcf)					
	No. 2 fuel oil (gallons)					
	No. 4 fuel oil (gallons)					
	Propane (gallons)					
	Steel Slag (tons)					
Month 2	Natural gas (mmcf)					
	No. 2 fuel oil (gallons)					
	No. 4 fuel oil (gallons)					
	Propane (gallons)					
	Steel Slag (tons)					
Month 3	Natural gas (mmcf)					
	No. 2 fuel oil (gallons)					
	No. 4 fuel oil (gallons)					
	Propane (gallons)					
	Steel Slag (tons)					

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report - Single Liquid Binder VOC Solvent

Source Name: Dave O'Mara Contractor Plant 0233
Initial Source Address: Portable, Indiana
FESOP Permit No.: F119-21451-05234

Facility: **Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles**

Parameter: Cutback or emulsified asphalt VOC solvent usage
Limit: Cutback asphalt rapid cure liquid binder usage shall not exceed 62.0 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt medium cure liquid binder usage shall not exceed 84.1 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt slow cure liquid binder usage shall not exceed 235.5 tons of VOC solvent per twelve (12) consecutive month period. Emulsified asphalt with solvent liquid binder usage shall not exceed 126.9 tons of VOC solvent per twelve (12) consecutive month period. Other asphalt with solvent liquid binder shall not exceed 2355.5 tons of VOC solvent per twelve (12) consecutive month period.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Multiple Liquid Binder Solvent Quarterly Report

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119-21451-05234
Facility: Cold-mix (stockpile mix) asphalt manufacturing operations and storage **piles**

Parameter: **VOC emissions**

Limit: VOC emissions from the sum of the binders shall not exceed 58.89 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Year: _____

Month	Type of Liquid binder	Solvent Usage This Month (tons)	Divisor	VOC emissions This Month (tons) for each solvent	VOC emissions This Month (tons)	VOC emissions Previous 11 Months (tons)	This month + Previous 11months =VOC emissions 12 Month Total (tons)
Month 1	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				
Month 2	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				
Month 3	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
☐ Deviation has been reported on:

Submitted by: _____ Date:_____

Title / Position: _____ Phone:_____

Signature:_____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119 21451 05234
Facility: RAP Crusher
Parameter: **Residence Time**
Limit: The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

Manufacture Date: _____ **Installation Date:** _____

Make: _____ **Removal Date:** _____

Model: _____ **Model Year:** _____

Horsepower Rating: _____ **MMBtu/hr Rating:** _____

QUARTER:_____ YEAR:_____

Month	Column 1	Column 2	Column 1 - Column 2
	Number of Days Onsite This Month	Number of Days Onsite Previous 11 Months	12 Month Total Number of Days Onsite
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119-21451-05234

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C - General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY

Dave O'Mara Contractor Plant 0233
Portable

Attachment A

HOT-MIX ASPHALT PLANT

FUGITIVE DUST CONTROL PLAN

F119-21451-05234

HOT-MIX ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

(a) Fugitive particulate matter emissions from paved roads and parking lots shall be controlled by one or more of the following methods:

(1) cleaning by vacuum sweeping on an as needed basis (monthly at a minimum)

(2) power brooming while wet either from rain or application of water.

(b) Fugitive particulate matter emissions from unpaved roads and parking lots shall be controlled by one or more of the following methods:

(1) paving with asphalt;

(2) treating with emulsified asphalt;

(3) watering;

(4) double chip and seal the road surface.

(c) Fugitive particulate matter emissions from aggregate stockpiles shall be controlled by one or more of the following methods on an as needed basis:

(1) maintaining minimum size and number of stock piles of aggregate;

(2) treating around the stockpile area with emulsified asphalt;

(3) treating around the stockpile area with water;

(4) treating the stockpiles with water.

(d) Fugitive particulate matter emissions from outdoor conveying of aggregates shall be controlled by the following method on an as needed basis:

(1) applying water at the feed and the intermediate points.

(e) Fugitive particulate matter emissions from the transfer of aggregates shall be controlled by one of the following methods:

(1) minimize the vehicular distance between transfer points;

(2) enclose the transfer points;

(3) apply water on transfer points on an as needed basis.

(f) Fugitive particulate matter emissions from transportation of aggregate by truck, front end loader, etc. shall be controlled by one of the following methods:

(1) tarping the aggregate hauling vehicles;

(2) maintain vehicle bodies in a condition to prevent leakage;

(3) spray the aggregates with water;

(4) maintain a 10 MPH speed limit in the yard.

(g) Fugitive particulate matter emissions from the loading and unloading of aggregate shall be controlled by one of the following methods:

(1) reduce free fall distance to a minimum;

(2) reduce the rate of discharge of the aggregate;

(3) spray the aggregate with water on an as needed basis.

Federally Enforceable State Operating Permit (FESOP) Renewal
OFFICE OF AIR QUALITY

Dave O'Mara Contractor Plant 0233
Portable Source

Attachment B

Title 40: Protection of Environment

PART 60—NEW SOURCE PERFORMANCE STANDARDS

Subpart I—Standards of Performance for Hot Mix Asphalt Facilities

F119-21451-05234

Title 40: Protection of Environment

Subpart I—Standards of Performance for Hot Mix Asphalt Facilities

§ 60.90 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977, as amended at 51 FR 12325, Apr. 10, 1986]

§ 60.91 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Hot mix asphalt facility* means any facility, as described in §60.90, used to manufacture hot mix asphalt by heating and drying aggregate and mixing with asphalt cements.

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any affected facility any gases which:

(1) Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf).

(2) Exhibit 20 percent opacity, or greater.

[39 FR 9314, Mar. 8, 1974, as amended at 40 FR 46259, Oct. 6, 1975]

§ 60.93 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standards in §60.92 as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).

(2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

[54 FR 6667, Feb. 14, 1989]

Federally Enforceable State Operating Permit (FESOP) Renewal
OFFICE OF AIR QUALITY

Dave O'Mara Contractor Plant 0233
Portable Source

Attachment C

Title 40: Protection of Environment

PART 60—NEW SOURCE PERFORMANCE STANDARDS

Subpart OOO - STANDARDS OF PERFORMANCE FOR NONMETALLIC MINERAL PROCESSING PLANTS

F119-21451-05234

40 CFR 60, SUBPART OOO—STANDARDS OF PERFORMANCE FOR NONMETALLIC MINERAL PROCESSING PLANTS

SOURCE: 74 FR 19309, Apr. 28, 2009, unless otherwise noted.

§ 60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in § 60.671).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in § 60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in § 60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in § 60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in § 60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§ 60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in § 60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§ 60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.

§ 60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

Bagging operation means the mechanical process by which bags are filled with nonmetallic minerals.

Belt conveyor means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capacity means the cumulative rated capacity of all initial crushers that are part of the plant.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more affected facilities to a control device.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a nonmetallic mineral processing plant.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

Crush or *Crushing* means to reduce the size of nonmetallic mineral material by means of physical impaction of the crusher or grinding mill upon the material.

Crusher means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: Jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

Enclosed truck or railcar loading station means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

Fixed plant means any nonmetallic mineral processing plant at which the processing equipment specified in § 60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

Fugitive emission means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

Grinding mill means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: Hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

Initial crusher means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals:

(1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(2) Sand and Gravel.

(3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

(6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(7) Pumice.

(8) Gilsonite.

(9) Talc and Pyrophyllite.

(10) Boron, including Borax, Kernite, and Colemanite.

(11) Barite.

(12) Fluorospar.

(13) Feldspar.

(14) Diatomite.

(15) Perlite.

(16) Vermiculite.

(17) Mica.

(18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in § 60.670 (b) and (c).

Portable plant means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

Production line means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

Saturated material means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be “saturated” for purposes of this definition.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.

Seasonal shut down means shut down of an affected facility for a period of at least 45 consecutive days due to weather or seasonal market conditions.

Size means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

Stack emission means the particulate matter that is released to the atmosphere from a capture system.

Storage bin means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing or loading.

Transfer point means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

Truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: Trucks, front end loaders, skip hoists, and railcars.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

Wet material processing operation(s) means any of the following:

(1) Wet screening operations (as defined in this section) and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line; or

(2) Screening operations, bucket elevators and belt conveyors in the production line downstream of wet mining operations (as defined in this section) that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line.

Wet mining operation means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

Wet screening operation means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

§ 60.672 Standard for particulate matter (PM).

(a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under § 60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under § 60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(c) [Reserved]

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) Fugitive emissions from the building openings (except for vents as defined in § 60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in § 60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

(f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital cost that would be required to construct a comparable new facility” under § 60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under § 60.15, the “fixed capital cost of the new components” includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

(a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals ±1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under § 60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and § 60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under § 60.11 of this part and § 60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under § 60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7). The Method 22 (40 CFR part 60, Appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under § 60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to § 60.675(b) simultaneously with a Method 22 (40 CFR part

60, Appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.

(d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (*e.g.* , using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

§ 60.675 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in § 60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A-3 of this part or Method 17 of Appendix A-6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60,

Appendix A-3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A-4 of this part and the procedures in § 60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in § 60.672(b) or § 60.672(e)(1), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in § 60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (*e.g.,* road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under § 60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A-4), the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A-4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under § 60.672(b) or § 60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in § 60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and § 60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A-7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in § 60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator

must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and § 60.11 to show compliance with the opacity limit in § 60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A-3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A-3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A-1 of this part [*i.e.,* velocity head <1.3 mm H_2O (0.05 in. H_2O)] and referred to in EPA Method 5 of Appendix A-3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (*e.g.,* from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_e = \frac{Q_f}{A_e} \qquad \text{(Eq. 1)}$$

Where:

V_e = average building vent velocity (feet per minute);

Q_f = average fan flow rate (cubic feet per minute); and

A_e = area of building vent and measurement location (square feet).

(f) To comply with § 60.676(d), the owner or operator shall record the measurements as required in § 60.676(c) using the monitoring devices in § 60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A-4) testing, the owner or operator may reduce the 30-day advance notification of performance test in § 60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in § 60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with § 60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§ 60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under § 60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to § 60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to § 60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by § 63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in § 60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with § 60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in § 60.672(b) and the emission test requirements of § 60.11.

(h) The subpart A requirement under § 60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to § 60.4(b).

Table 1 to Subpart OOO of Part 60—Exceptions to Applicability of Subpart A to Subpart OOO

Subpart A reference	Applies to subpart OOO	Explanation
60.4, Address	Yes	Except in § 60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§ 60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§ 60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§ 60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§ 60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§ 60.675(c)), Method 9 (40 CFR part 60, Appendix A-4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

Table 2 to Subpart OOO of Part 60—Stack Emission Limits for Affected Facilities With Capture Systems

For * * *	The owner or operator must meet a PM limit of * * *	And the owner or operator must meet an opacity limit of * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§ 60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) [a]	7 percent for dry control devices [b]	An initial performance test according to § 60.8 of this part and § 60.675 of this subpart; and Monitoring of wet scrubber parameters according to § 60.674(a) and § 60.676(c), (d), and (e).
Affected facilities (as defined in §§ 60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	0.032 g/dscm (0.014 gr/dscf) [a]	Not applicable (except for individual enclosed storage bins) 7 percent for dry control devices on individual enclosed storage bins	An initial performance test according to § 60.8 of this part and § 60.675 of this subpart; and Monitoring of wet scrubber parameters according to § 60.674(a) and § 60.676(c), (d), and (e); and
			Monitoring of baghouses according to § 60.674(c), (d), or (e) and § 60.676(b).

[a] Exceptions to the PM limit apply for individual enclosed storage bins and other equipment. See § 60.672(d) through (f).

[b] The stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

Table 3 to Subpart OOO of Part 60—Fugitive Emission Limits

For * * *	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§ 60.670 and 60.671) * * *	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§ 60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to § 60.11 of this part and § 60.675 of this subpart.
Affected facilities (as defined in §§ 60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity	12 percent opacity	An initial performance test according to § 60.11 of this part and § 60.675 of this subpart; and Periodic inspections of water sprays according to § 60.674(b) and § 60.676(b); and
			A repeat performance test according to § 60.11 of this part and § 60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in § 60.674(b) and § 60.676(b) are exempt from this 5-year repeat testing requirement.

Reference:
The US EPA Electronic Code of Federal Regulations - 40 CFR 60, Subpart OOO—Standards Of Performance For Nonmetallic Mineral Processing Plants weblink:
http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=e5222bf93f94811ebcdbf9b4d7d23dcd&rgn=div6&view=text&node=40:7.0.1.1.1.81&idno=40

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a
Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	Dave O'Mara Contractor Plant 0233
Source Location:	Portable
Current Location:	1110 North Oard Road, Bloomington, Indiana, 47404
County:	Monroe
SIC Code:	2951
Operation Permit No.:	F119-21451-05234
Operation Permit Issuance Date:	March 3, 2006
Significant Permit Revision No.:	105-33049-05234
Permit Reviewer:	Hannah L. Desrosiers

On October 3, 2013, the Office of Air Quality (OAQ) had a notice published in The Herald Times, Bloomington, Indiana, stating that Dave O'Mara Contractor Plant 0233 had applied for a significant revision of their FESOP to add onsite onsite reclaimed asphalt pavement (RAP) crushing and certified asbestos-free recycled asphalt shingles (RAS) grinding. The RAP crushing and RAS grinding will be performed by a portable unit that will be moved to the site on an as-needed basis. Dave O'Mara has also requested approval to add propane as a back-up fuel in the aggregate dryer, construct two (2) new screen decks and one (1) new 16,195 gallon asphalt emulsion storage tank, and increase its certified asbestos-free RAS storage capacity. Each of these changes is intended to increase the operational flexibility of this portable source. Furthermore, Dave O'Mara has indicated that it no longer wishes to have approval to relocate to LaPorte County due to additional requirements specific to the county. Finally, Dave O'Mara has requested the permit be updated to correct several emission unit descriptions to reflect actual operating conditions. The notice also stated that the OAQ proposed to issue a FESOP Significant Revision for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

No comments were received during the public notice period.

Additional Changes

U.S. EPA, in the Federal Register Notice 78 FR 47191 dated August 5, 2013, has designated Daviess County, Veale Township, Marion County, Center, Perry, and Wayne Townships, Morgan County, Clay and Washington Townships, Pike County, Washington Township, and Vigo County, Fayette and Harrison Townships as nonattainment for SO_2. The Permittee is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone, and in Lake, LaPorte, and Porter Counties.

If this source were to locate to any of the townships listed in the paragraph above, this source would not be subject to the requirements of Emission Offset, 326 IAC 2-3, since the potential to emit of SO_2 from the entire source is limited to less than 100 tons per year.

The Permittee previously elected to limit SO_2 emissions to less than one hundred (100) tons per year in its federally enforceable permit. Therefore, to correct an unintentional omission, the permit has been revised, as follows, with deleted language shown as ~~strikeouts~~ and new language **bolded**:

D.1.4 Fuel and Slag Limits [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3]

Pursuant to 326 IAC 2-8-4, and in order to render the requirements of 326 IAC 2-7, 326 IAC 2-2, and 326 IAC 2-3 not applicable, the Permittee shall comply with the following:

(a) Slag Usage Limitation

Steel slag usage shall not exceed 150,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Slag and Fuel Specifications

(1) SO2 emissions from the usage of steel slag in the dryer/mixer shall not exceed 0.0014 pounds of SO2 per ton of steel slag processed.

(2) The thirty (30) day calendar month average sulfur content of the steel slag shall not exceed 0.66 percent by weight, with compliance determined at the end of each month.

(3) When combusting No. 2 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent by weight, with compliance determined at the end of each month.

(4) When combusting No. 4 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 4 fuel oil shall not exceed 1.60 percent by weight, with compliance determined at the end of each month.

(c) Single Fuel Usage Limitations

When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner the usage of fuel shall be limited as follows:

(1) Natural gas usage shall not exceed 911 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) No. 2 fuel oil usage shall not exceed 2,660,632 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) No. 4 fuel oil usage shall not exceed 787,104 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) Propane usage shall not exceed 10,066,740 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Multiple Fuel & Slag Usage Limitations

When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and in conjunction with the use of steel slag in the aggregate mix, emissions from the dryer/mixer shall be limited as follows:

(1) SO2 emissions from the dryer/mixer shall not exceed 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) NOx emissions from the dryer/mixer shall not exceed 86.55 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

When combined with the limited potential to emit SO2 and NOx from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of SO2 and NOx to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program)**,** ~~and~~ 326 IAC 2-2 (PSD)**, and 326 IAC 2-3 (Emission Offset)** not applicable.

* * * * * *

Additionally, the permit number for this revision has been corrected in the header, as follows:

Dave O'Mara Contractor Plant 0233 2nd Significant Permit Revision No.: 105-**33049**~~29731~~-05234 Page 3 of 3
Portable Revised by: Hannah L. Desrosiers OP No. F119-21451-05234
Permit Reviewer: CAP/MES

* * * * * *

No other changes have been made to the permit as a result of this SO_2 nonattainment designation for Daviess County, Veale Township, Marion County, Center, Perry, and Wayne Townships, Morgan County, Clay and Washington Townships, Pike County, Washington Township, and Vigo County, Fayette and Harrison Townships.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-9327 or toll free at 1-800-451-6027 extension 3-9327.

(b) A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name:	Dave O'Mara Contractor Plant 0233
Source Location:	Portable
Current Location:	1110 North Oard Road, Bloomington, Indiana,47404
County:	Monroe
SIC Code:	2951
Operation Permit No.:	F119-21451-05234
Operation Permit Issuance Date:	March 3, 2006
Significant Permit Revision No.:	105-33049-05234
Permit Reviewer:	Hannah L. Desrosiers

On April 4, 2013, the Office of Air Quality (OAQ) received an application from Dave O'Mara Contractor Plant 0233 (Dave O'Mara) related to a modification to an existing portable hot drum-mix asphalt plant.

Existing Approvals

The source was issued FESOP Renewal No. 119-21451-05234 on March 3, 2006. The source has since received the following approvals:

(a) First Relocation No. 109-24419-05234, issued on March 27, 2007;

(b) First Administrative Amendment No. 109-25676-05234, issued on January 22, 2008;

(c) Second Relocation No. 083-26117-05234, issued on March 6, 2008;

(d) Second Administrative Amendment No. 109-27602-05234, issued on March 18, 2009;

(e) Third Relocation No. 105-27747-05234, issued on April 17, 2009;

(f) Third Relocation Revocation No. 105-28201-05234, issued on July 14, 2009;

(g) Fourth Relocation No. 145-28348-05234, issued on September 3, 2009;

(h) Fifth Relocation No. 105-28882-05234, issued on February 15, 2010.

(i) First Significant Permit Revision No. 105-29731-05234, issued on January 13, 2011; and

(j) Third Administrative Amendment No. 105-30998-05234, issued on November 14, 2011.

County Attainment Status

The source is located in Monroe County. The following attainment status designations are applicable to Monroe County:

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(Air Pollution Control Board; 326 IAC 1-4-17; filed Dec 26, 2007, 1:43 p.m.: 20080123-IR-326070308FRA)

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Monroe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM2.5
Monroe County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Monroe County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Portable Source Status

(a) *Initial Location*

This is a portable source and its initial location was State Highway 60 West, Mitchell, IN 47446, Owen County.

(b) *PSD and Emission Offset Requirements*

The emissions from this portable source were reviewed under the requirements of the Prevention of Significant Deterioration (PSD) 326 IAC 2-2 and Emission Offset 326 IAC 2-3.

(c) *Relocation Locations*

The Permittee is approved for operation in all areas of Indiana, except in severe nonattainment areas for ozone, or Lake, LaPorte, or Porter Counties. Currently, no county in Indiana is designated severe non-attainment for ozone. Therefore, since the limited potential emissions of all regulated pollutants are less than 100 tons per year, this source may relocate to any county in Indiana, except Lake, LaPorte, or Porter counties, and will be a minor source under 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset).

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

Note: The following table was taken directly from the revision letter for FESOP Administrative Amendment No. 105-30998-05234, issued on November 14, 2011 *(page 13 of 13).*

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	**PM_{10}***	**$PM_{2.5}$****	**SO_2**	**NO_x**	**VOC**	**CO**	**GHGs** as CO2e**	**Total HAPs**	**Worst Single HAP**
Ducted Emissions										
Dryer Fuel Combustion (worst case) (1)	8.82	10.45	10.45	94.45	97.75	2.83	43.22	62,197.01	1.16	0.93 (hexane)
Dryer/Mixer (2) (Process)	101.14	58.17	88.14	5.50	27.50	16.00	65.00	16,626.00	4.41	1.55 (formaldehyde)
Dryer/Mixer Slag Processing (3)	0	0	0	0.11	0	0	0	0	0	N/A
Hot Oil Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,414.19	0.02	0.016 (hexane)
Worst Case Emissions*	**101.27**	**58.38**	**88.35**	**99.0**	**99.0**	**16.05**	**65.74**	**63,611.20**	**4.43**	**1.55 (formaldehyde)**
Fugitive Emissions										
Asphalt Load-Out and On-Site Yard (3)	0.26	0.26	0.26	0	0	2.47	0.85	0	0.05	0.01 (formaldehyde)
Material Storage Piles	3.36	1.18	1.18	0	0	0	0	0	0	N/A
Material Processing and Handling (3)	3.23	1.53	0.23	0	0	0	0	0	0	N/A
Material Screening, and Conveying (3)	15.87	5.80	5.80	0	0	0	0	0	0	N/A
Unpaved and Paved Roads (worst case) (1)	125.02	31.86	3.19	0	0	0	0	0	0	N/A
Cold Mix Asphalt Production (4)	0	0	0	0	0	58.89	0	**0**	15.36	5.30 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	N/A
Volatile Organic Liquid Storage Vessels ***	0	0	0	0	0	negl.	0	0	negl.	negl.
Total Fugitive Emissions	**147.73**	**40.62**	**10.65**	**0**	**0**	**61.36**	**0.85**	**0**	**15.41**	**5.30 (xylenes)**
Total Limited/ Controlled Emissions	**249.0**	**99.0**	**99.0**	**99.0**	**99.0**	**77.41**	**66.59**	**63,611.20**	**19.84**	**5.30 (xylenes)**

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs** as CO2e	Total HAPs	Worst Single HAP
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	N/A	N/A
Emission Offset/ Nonattainment NSR Major Source Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

negl = negligible N/A = Not applicable HCL = hydrogen chloride

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". Additionally, US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

(1) Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(3) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).

(4) Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).

(a) This existing portable source is not a major source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) If this source were to locate to a county that was nonattainment for any criteria pollutant, this source would not be a major stationary source under Emission Offset (326 IAC 2-3), because no nonattainment pollutant is emitted at a rate of 100 tons per year or more.

(c) This existing portable source is not a major source of HAPs, as defined in 40 CFR 63.41, because the Permittee has accepted limits on HAPs emissions to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Dave O'Mara Contractor Plant 0233 (Dave O'Mara) on April 4, 2013, relating to the addition of onsite reclaimed asphalt pavement (RAP) crushing and certified asbestos-free recycled asphalt shingles (RAS) grinding. The RAP crushing and RAS grinding will be performed by a portable unit that will be moved to the site on an as-needed basis. Dave O'Mara has also requested approval to add propane as a back-up fuel in the aggregate dryer, construct two (2) new screen decks and one (1) new 16,195 gallon asphalt emulsion storage tank, and increase its certified asbestos-free RAS storage capacity. Each of these changes is intended to increase the operational flexibility of this portable source. Furthermore, Dave O'Mara has indicated that it no longer wishes to have approval to relocate to LaPorte County due to additional requirements specific to the county. Finally, Dave O'Mara has requested the permit be updated to correct several emission unit descriptions to reflect actual operating conditions.

(a) The following is a list of the new insignificant activities:

(1) One (1) 335 horsepower, diesel fuel-fired portable RAP crusher for processing reclaimed asphalt pavement (RAP), identified as Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(2) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres.

(3) One (1) virgin aggregate, two (2) product screen deck, approved for construction in 2013;

(4) One (1) recycle materials, two (2) product screen deck, approved for construction in 2013; and

(5) One (1) 16,195 gallon asphalt emulsion storage tank, identified as AET-0233, approved for construction in 2013.

(b) The following is a list of the modified emission units and pollution control device(s):

(1) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 400 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 104.0 million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, residual No. 4 fuel oil, or propane, as available, including steel slag and certified asbestos-free recycled shingles (RAS) in the aggregate mix, using one (1) baghouse for particulate control, and exhausting to stack SV1.

(2) Two (2) virgin aggregate collecting conveyors.

(3) Three (3) virgin aggregate transfer conveyors.

(d) Upon review of the permit and supporting documentation, IDEM OAQ, in collaboration with the source, determined that the following additional revision was required to maintain the Source's FESOP Status:

(1) Dave O' Mara intends to grind shingles at this plant; therefore, they will be required to use/purchase only supplier certified asbestos-free factory seconds and/or post consumer waste shingles, since it is the physical act of grinding that releases asbestos into the air. A new condition limiting the use of asphalt shingles in the aggregate mix to only those that are asbestos-free, will be added to the permit.

This is a new requirement for this source. This is a Title I change.

(E) Finally, IDEM OAQ has determined that the following additional revisions were required.

(1) A number of Federal National Emission Standards for Hazardous Air Pollutants (NESHAPs) and New Source Performance Standards (NSPS) have been promulgated, or revised, since the issuance of the FESOP. Therefore, IDEM has performed an applicability determination for the following:

A. 40 CFR 63, Subpart LLLLL (5L);
B. 40 CFR 63, Subpart DDDDD (5D);
F. 40 CFR 63, Subpart JJJJJJ (6J); and
G. 40 CFR 63, Subpart AAAAAAA (7A).

Enforcement Issues

There are no pending enforcement actions related to this revision.

Fugitive Emissions

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The source is subject to New Source Performance Standard (NSPS) Subpart I, Standards of Performance for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I], which was in effect on August 7, 1980.

Emission Calculations

See Appendices A.1, A.2, and A.3 of this TSD for detailed emission calculations.

The following applies as a result of this revision:

- The new 335 horsepower, diesel fuel-fired portable crusher is considered a portable, non-stationary, nonroad engine as defined in 40 CFR §1068.30. Additionally, the definition of "stationary source" under 326 IAC 2-2-1(yy), and "source" under 326 IAC 1-2-73, does not include emissions resulting from an internal combustion engine used for transportation purposes (mobile sources), or from a nonroad engine or nonroad vehicle. Therefore, the combustion emissions from the RAP crusher are not included in the potential to emit calculations.

- It was discovered that the potential to emit from the silo filling activities were unintentionally omitted in previous revisions for this existing portable plant. Consequently, this omission has corrected. As a result, the existing dryer/mixer process PM, PM10, and PM2.5 pound per ton (lb/ton) emission limits have been revised in order to ensure compliance with the one hundred (100) ton per year FESOP threshold for SO2, and making the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

  This is a Title I change.

Permit Level Determination – FESOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e	Total HAPs	Worst Single HAP
Ducted Emissions										
Dryer Fuel Combustion - Propane	2.52	2.52	2.52	0.10	65.43	5.03	37.75	64,385.05	0	N/A
Diesel-Fired Generator Fuel Combustion (< 600 HP) (RAP Crusher)*	0	0	0	0	0	0	0	0	0	N/A
Worst Case Emissions**	**2.52**	**2.52**	**2.52**	**0.10**	**65.43**	**5.03**	**37.75**	**64,385.05**	**0**	**N/A**
Fugitive Emissions										
Material Crushing (RAP Crusher)	4.73	2.10	2.10	0	0	0	0	0	0	N/A
Material Storage Piles (Shingles)	0.16	0.06	0.06	0	0	0	0	0	0	N/A
Total Fugitive Emissions	**4.89**	**2.16**	**2.16**	**0**	**0**	**0**	**0**	**0**	**0**	**N/A**
Total PTE of Proposed Revision	**7.41**	**4.67**	**4.67**	**0.10**	**65.43**	**5.03**	**37.75**	**64,385.05**	**0**	**N/A**

N/A = not applicable
Detailed calculations are available in TSD Appendix A.3: Unlimited Potential To Emit of the revision.
* The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.
** Worst Case Emissions (tons/yr) = Emissions from Dryer Fuel Combustion (Worst Case) + Worst Case Emissions from Hot Oil Heater Fuel Combustion/Process + Diesel-Fired Generator Fuel Combustion (< 600 HP) (200 ton/hr RAP Crusher).

Pursuant to 326 IAC 2-8-11.1(f)(1)(E), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision involves a change in operation (i.e., addition of propane as a back-up fuel) with potential to emit greater than or equal to twenty-five (25) tons per year of Nitrogen oxides (NOx).

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source *(reflecting adjustment of existing limits)*, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs** as CO2e	Total HAPs	Worst Single HAP
Ducted/Ductable Emissions										
Dryer Fuel Combustion (worst case) (1)	~~8.82~~ **2.75**	~~10.45~~ **4.39**	~~10.45~~ **4.39**	94.45	**86.55** ~~97.75~~	**5.03** ~~2.83~~	**38.26** ~~43.22~~	**64,385.05** ~~62,197.01~~	**0.96** ~~1.16~~	**0.82**~~0.93~~ (hexane)
Dryer/Mixer (2) (Process)	**100.45** ~~101.14~~	**57.74** ~~58.17~~	**87.71** ~~88.14~~	5.50	27.50	16.00	65.00	16,626.00	4.41	1.55 (formaldehyde)
Dryer/Mixer Slag Processing (2)	0	0	0	0.11	0	0	0	0	0	N/A
Hot Oil Heater - Fuel Combustion / Process (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	~~1,414.19~~ **1,752.00**	0.02	0.016 (hexane)
Generator (< 600 hp) Fuel Combustion (crusher)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**N/A**
Generator (> 600 hp) Fuel Combustion	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**N/A**
Worst Case Emissions α	**100.57** ~~101.27~~	**57.95** ~~58.38~~	**87.92** ~~88.35~~	99.0	**87.80** ~~99.0~~	16.05	65.74	**66,137.05** ~~63,611.20~~	4.43	1.55 (formaldehyde)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, and On-Site Yard (3)	**0.55** ~~0.26~~	**0.55** ~~0.26~~	**0.55** ~~0.26~~	0	0	**8.57** ~~2.47~~	**1.44** ~~0.85~~	0	**0.14** ~~0.05~~	**0.04**~~0.01~~ (formaldehyde)
Material Storage Piles	**3.76** ~~3.36~~	**1.32** ~~1.18~~	**1.32** ~~1.18~~	0	0	0	0	0	0	N/A
Material Processing and Handling (3)	3.23	1.53	0.23	0	0	0	0	0	0	N/A
Material Screening, and Conveying (3)	15.87	5.80	5.80	0	0	0	0	0	0	N/A
Unpaved and Paved Roads (worst case) (1)	125.02	31.86	3.19	0	0	0	0	0	0	N/A
Cold Mix Asphalt Production (4)	0	0	0	0	0	58.89	0	0	15.36	5.30 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	N/A
Volatile Organic Liquid Storage Vessels ***	0	0	0	0	0	negl.	0	0	negl.	negl.
Total Fugitive Emissions	**148.43** ~~147.73~~	**41.05** ~~40.62~~	**11.08** ~~10.65~~	0	0	**67.45** ~~61.36~~	**1.44** ~~0.85~~	0	**15.50** ~~15.41~~	5.30 (xylenes)
Total Limited/ Controlled Emissions	249.0	99.0	99.0	99.0	**87.80** ~~99.0~~	**83.50** ~~77.41~~	**67.18** ~~66.59~~	**66,137.05** ~~63,611.20~~	~~19.84~~ **19.93**	5.30 (xylenes)
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	N/A	N/A
Emission Offset/Nonattainment NSR Major Source Thresholds	N/A	100	100	100	100	100	100	N/A	N/A	N/A

negl. = negligible N/A = Not applicable

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant.

** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

α Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP

(1) Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(3) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).

(4) Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment

is made practically enforceable in the permit. *(Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)*.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	**PM_{10}***	**$PM_{2.5}$****	**SO_2**	**NO_x**	**VOC**	**CO**	**GHGs** as CO2e**	**Total HAPs**	**Worst Single HAP**
Ducted/Ductable Emissions										
Dryer Fuel Combustion (worst case) (1)	2.75	4.39	4.39	94.45	86.55	5.03	38.26	64,385.05	0.96	0.82 (hexane)
Dryer/Mixer (2) (Process)	100.45	57.74	87.71	5.50	27.50	16.00	65.00	16,626.00	4.41	1.55 (formaldehyde)
Dryer/Mixer Slag Processing (2)	0	0	0	0.11	0	0	0	0	0	N/A
Hot Oil Heater - Fuel Combustion / Process (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,752.00	0.02	0.016 (hexane)
Generator (< 600 hp) Fuel Combustion (RAP Crusher)	0	0	0	0	0	0	0	0	0	N/A
Generator (> 600 hp) Fuel Combustion	0	0	0	0	0	0	0	0	0	N/A
Worst Case Emissions α	**100.57**	**57.95**	**87.92**	99.0	**87.80**	16.05	65.74	**66,137.05**	4.43	1.55 (formaldehyde)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, and On-Site Yard (3)	0.55	0.55	0.55	0	0	8.57	1.44	0	0.14	0.04 (formaldehyde)
Material Storage Piles	3.76	1.32	1.32	0	0	0	0	0	0	N/A
Material Processing and Handling (3)	3.23	1.53	0.23	0	0	0	0	0	0	N/A
Material Screening, and Conveying (3)	15.87	5.80	5.80	0	0	0	0	0	0	N/A
Unpaved and Paved Roads (worst case) (1)	125.02	31.86	3.19	0	0	0	0	0	0	N/A
Cold Mix Asphalt Production (4)	0	0	0	0	0	58.89	0	0	15.36	5.30 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	N/A
Volatile Organic Liquid Storage Vessels ***	0	0	0	0	0	negl.	0	0	negl.	negl.
Total Fugitive Emissions	**148.43**	**41.05**	**11.08**	**0**	**0**	**67.45**	**1.44**	**0**	**15.50**	**5.30 (xylenes)**
Total Limited/ Controlled Emissions	**249.0**	**99.0**	**99.0**	**99.0**	**87.80**	**83.50**	**67.18**	**66,137.05**	**19.93**	**5.30 (xylenes)**
Title V Major Source Thresholds	N/A	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	N/A	N/A
Emission Offset/Nonattainment NSR Major Source Thresholds	N/A	100	100	100	100	100	100	N/A	N/A	N/A

negl. = negligible N/A = Not applicable

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant.

** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

α Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP.

(1) Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(3) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).

(4) Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).

FESOP and PSD Minor Status

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

Additionally, this modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(a) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

(a) The asphalt production rate shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

This is an existing requirement for this source.

(b) PM emissions from the dryer/mixer shall not exceed 0.201 pounds per ton of asphalt produced.

This is a change from 0.202 pounds of PM per ton of asphalt produced. This is a Title I change.

When combined with the limited potential to emit PM from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

Note: A PM limit is not required to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable for the new RAP crushing operation because this operations/activity is inherently limited by the FESOP and PSD asphalt production throughput limit established in the permit. The source can only crush as much material as it can use in the aggregate mix, and the calculations found on the "Material Processing, Handling, Crushing, Screening, and Conveying" worksheet, Appendix A.2, estimate particulate emissions based on the total material needs of the asphalt production operation, not just the portion of the mix that is RAP. The unlimited, uncontrolled particulate emissions from the crusher, found on the "Material Crushing Emissions" worksheet, Appendix A.3, estimated at 8760 hours/year, are 4.73 tons per year. However, after implementing the below-listed asphalt production PSD avoidance limit, the unlimited, uncontrolled particulate emissions from crushing, estimated at 8760 hours/year, decrease to 1.92 tons per year. Additionally, the PSD asphalt production throughput limit also inherently limits particulate emissions from the asphalt load-out and on-site yard, material processing and handling, material screening, and conveying, and the paved and unpaved roads.

(b) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable, PM10, PM2.5, CO, and VOC emissions from the dryer/mixer process shall be limited as follows:

(a) The asphalt production rate shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

This is an existing requirement for this source.

(b) PM10 emissions from the dryer/mixer shall not exceed 0.115 pounds per ton of asphalt produced.

This is a change from 0.116 pounds of PM10 per ton of asphalt produced. This is a Title I change.

(c) PM2.5 emissions from the dryer/mixer shall not exceed 0.175 pounds per ton of asphalt produced.

This is a change from 0.176 pounds of PM2.5 per ton of asphalt produced. This is a Title I change.

(d) CO emissions from the dryer/mixer shall not exceed 0.13 pounds per ton of asphalt produced.

This is an existing requirement for this source.

(e) VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt produced.

This is an existing requirement for this source.

When combined with the limited potential to emit PM10, PM2.5, CO, and VOC from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of PM10, PM2.5, CO, and VOC to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

(c) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable, SO2, NOx, and HAP emissions from the dryer/mixer shall be limited as follows:

(1) <u>Slag Usage Limitation</u>

Steel slag usage shall not exceed 150,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

This is an existing requirement for this source.

(2) <u>Slag and Fuel Specifications</u>

(A) SO2 emissions from the usage of steel slag in the dryer/mixer shall not exceed 0.0014 pounds of SO2 per ton of steel slag processed.

This is an existing requirement for this source.

(B) The sulfur content of the steel slag shall not exceed 0.66 percent by weight.

This is an existing requirement for this source.

(C) When combusting No. 2 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent by weight, with compliance determined at the end of each month.

This is an existing requirement for this source.

(D) When combusting No. 4 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 4 fuel oil shall not exceed 1.60 percent by weight, with compliance determined at the end of each month.
This is an existing requirement for this source.

(3) Single Fuel Usage Limitations

When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner the usage of fuel shall be limited as follows:

(A) Natural gas usage shall not exceed 991 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

This is a change from 1,028.93 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month. This change is due to the correction to the dryer burner heat input capacity and represents unlimited fuel usage in the burner. This is a Title I change.

Note: Although the PTE from the combustion of natural gas in the 104.0 MMBtu/hr dryer burner is now less than 100 tons/yr for all criteria pollutants, and less than 10 tons per year for any single HAP and less than 25 tons per year for combined HAPs, a limit is kept in the permit to assist Dave O'Mara in maintaining compliance with the existing annual SO2 emission limit (< 94.56 tons/yr).

(B) No. 2 fuel oil usage shall not exceed 2,660,632 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

This is an existing requirement for this source.

(C) No. 4 fuel oil usage shall not exceed 787,104 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

This is an existing requirement for this source.

(D) Propane usage shall not exceed 10,066,740 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

This is a new requirement for this source. This is a Title I change.

Note: Although the PTE from the combustion of propane in the 104.0 MMBtu/hr dryer burner is less than 100 tons/yr for all criteria pollutants, and less than 10 tons per year for any single HAP and less than 25 tons per year for combined HAPs, a limit is added to the permit to assist Dave O'Mara in maintaining compliance with the existing annual SO2 emission limit (< 94.56 tons/yr).

(4) Multiple Fuel Usage Limitations

When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and in conjunction with the use of steel slag in the aggregate mix, emissions from the dryer/mixer shall be limited as follows:

(A) SO2 emissions from the dryer/mixer shall not exceed 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

SO2 = 94.45 + 0.11 = 94.56 tons/year

This is an existing requirement for this source.

The Permittee shall limit fuel usage in the dryer/mixer burner in order to limit SO2 emissions from the dryer/mixer to less than limit above according to the following formula:

$$S = \frac{F(E_F) + R(E_R) + N(E_N) \mathbf{+ P(E_P)} + L(E_L)}{2000 \text{ lbs/ton}}$$

Where:

S = tons of sulfur dioxide emissions for twelve (12) month consecutive period

F = gallons of No. 2 fuel oil used in last twelve (12) months

R = gallons of No. 4 fuel oil used in last twelve (12) months

N = million cubic feet of natural gas used in last twelve (12) months

P = gallons of propane used in the dryer/mixer in last twelve (12) months

L = tons of steel slag used in last twelve (12) months with less than or equal to sixty-six hundredths percent (0.66%) sulfur content

Emission Factors:

E_F = 0.071 pounds per gallon of No. 2 fuel oil

E_R = **0.075**~~0.24~~ pounds per gallon of No. 4 fuel oil

E_N = 0.6 pounds per million cubic feet of natural gas

E_P = 0.00002 pounds per gallon of propane

E_L = 0.0014 pounds per ton of slag

This is a revised requirement for this source. This is a Title I change.

Note: Propane is added to assist Dave O'Mara in maintaining compliance with the annual SO2 emission limit (< 94.56 tons/yr).

(B) NOx emissions from the dryer/mixer shall not exceed 86.55 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

This is a change from 97.75 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. In spite of the addition of propane, this change is due to the correction to the dryer burner heat input capacity and represents unlimited natural gas usage in the burner. This is a Title I change

The Permittee shall limit fuel usage in the dryer/mixer in order to limit NOx emissions from the dryer/mixer to less than limit above according to the following formula:

$$N = \frac{F(E_F) + R(E_R) + G(E_G) \mathbf{+ P(E_P)}}{2{,}000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxide emissions for twelve (12) month consecutive period

F = gallons of No. 2 fuel oil used in last twelve (12) months

R = gallons of No. 4 fuel oil used in last twelve (12) months

G = million cubic feet of natural gas used in last twelve (12) months

P = gallons of propane used in the dryer/mixer in last twelve (12) months

Emission Factors:

E_F = 0.024 pounds per gallon of No. 2 fuel oil

E_R = 0.047 pounds per gallon of No. 4 fuel oil

E_G = 190 pounds per million cubic feet of natural gas

E_P = 0.013 pounds per gallon of propane

This is a revised requirement for this source. This is a Title I change.

Note: Natural gas and propane are added to assist Dave O'Mara in maintaining compliance with the annual NOx emission limit (< 86.55 tons/yr).

(5) <u>Asphalt Shingle Usage Limitation</u>
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall only grind and process certified asbestos-free factory second and/or post consumer waste shingles as an additive in its aggregate mix.

This is a new requirement for this source. This is a Title I change.

Note: Since the source intends to grind shingles at this plant, they will be required to purchase/use only supplier certified asbestos-free post consumer waste and/or factory seconds shingles in their aggregate mix. This requirement will be included, because it is the physical act of grinding that releases asbestos into the air, and will ensure compliance with the ten (10) ton per year single HAP, and the twenty-five (25) ton per year combined HAP, thresholds and will render the requirements of 326 IAC 2-7 Title V (Part 70) not applicable.

Compliance with these limits combined with the limited potential to emit SO2, NOx, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 and NOx to less than 100 tons per twelve (12) consecutive month period, each, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and shall render the requirements 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) <u>40 CFR 60, Subpart Kb - Standards for Volatile Organic Liquid Storage Vessels</u>
The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are not included in the permit for the new 16,195 gallon asphalt emulsion storage tank, because although the tank is approved for construction in 2013, after the rule applicability date of July 23, 1984, the tank has a maximum storage capacity of less than seventy-five cubic meters (75 m^3) (19,813 gallons), and the liquid stored in the tank has a maximum true vapor pressure of less than fifteen kiloPascals (15.0 kPa).

(b) <u>40 CFR 60, Subpart OOO - Standards for Nonmetallic Mineral Processing Plants</u>
This existing stationary drum hot-mix asphalt plant continues to be subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO (3O) (326 IAC 12), whenever a crusher is being used to reduce the size of nonmetallic minerals embedded in the Recycled Asphalt Pavement (RAP).

This is a new requirement for this source. This is a Title I change.

The units subject to this rule include the following:

(1) crushers;

(2) grinding mills; and

(3) subsequent affected facilities up to, but not including, the first storage silo or bin, such as:

(A) bucket elevators;

(B) belt conveyors;

(C) screening operations; and

(D) bagging operations;

Therefore, pursuant to 40 CFR 60.672(b) and (c), fugitive particulate matter emissions from any transfer point on belt conveyors or from any other of the above-listed facilities, except the crusher, shall continue to not exceed seven percent (7%) opacity, and fugitive particulate matter emissions from the crusher shall continue to not exceed twelve percent (12%) opacity.

The source will comply with this rule by applying the management techniques outlined in their Fugitive Dust Plan (included as Attachment A of the permit).

The portable RAP crusher is therefore still subject to the following requirements of 40 CFR 60, Subpart OOO (included as Attachment C of the permit):

(1) 40 CFR 60.670(a), (b), (d), (e), and (f)

(2) 40 CFR 60.671

(3) 40 CFR 60.672(b), (d), and (e)

(4) 40 CFR 60.673

(5) 40 CFR 60.674(b)

(6) 40 CFR 60.675(a), (c)(1)(i), (ii), (iii), (c)(3), (d), (e), (g), and (i)

(7) 40 CFR 60.676(a), (b)(1), (f), (h), (i), (j), and (k)

(8) Table 1 and Table 3

Note: this NSPS includes testing requirements applicable to the new Rap Crusher.

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the RAP crusher except as otherwise specified in 40 CFR 60, Subpart OOO.

(c) <u>40 CFR 60, Subpart IIII - NSPS for Stationary Compression Ignition Internal Combustion Engines</u>

The requirements of the New Source Performance Standard for Portable Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII (4I) (326 IAC 12), are not included in the permit for the diesel fuel-fired portable RAP crusher, as follows:

Pursuant to 40 CFR 60.4219, *Stationary internal combustion engine (ICE)* means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary ICE is not a *nonroad engine* as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include; reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Pursuant to 40 CFR 1068.30, *Nonroad engine* means:

(1) Except as discussed in paragraph (2) of this definition, a *nonroad engine* is an internal combustion engine that meets any of the following criteria:

(A) It is (or will be) used in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers).

(B) It is (or will be) used in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers).

(C) By itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

(2) An internal combustion engine is <u>not</u> a *nonroad engine* if it meets any of the following criteria:

(A) The engine is used to propel a motor vehicle, an aircraft, or equipment used solely for competition.

(B) The engine is regulated under 40 CFR part 60, (or otherwise regulated by a federal New Source Performance Standard promulgated under section 111 of the Clean Air Act (42 U.S.C. 7411)).

(C) The engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine (or engines) that replace(s) an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year. See §1068.31 for provisions that apply if the engine is removed from the location.

IDEM, OAQ has determined that based on information submitted by Dave O'Mara, the portable RAP crusher may be considered a nonroad engine for the purposes of 40 CFR 60, Subpart IIII applicability, provided it meets the requirements of paragraph (2)(iii) of the definition of nonroad engine in 40 CFR 1068.30. Therefore, the requirements of 40 CFR 60, Subpart IIII are not applicable to the portable RAP crusher, provided it meets the following requirements:

(1) The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

(2) Any portable RAP crusher that replaces a portable RAP crusher at a location and that is intended to perform the same or similar function as the portable RAP crusher replaced, will be included in calculating the consecutive time period.

(3) For the purposes of this condition and pursuant to 40 CFR 1068.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.

(d) <u>40 CFR 60, Subpart JJJJ - NSPS for Stationary Spark Ignition Internal Combustion Engines</u>
The requirements of the New Source Performance Standard for Portable Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (4J) (326 IAC 12), are not included in the permit, because the diesel fuel-fired portable RAP crusher is compression ignition and meets the definition of a nonroad engine, as defined in 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is therefore not considered a portable internal combustion engine as defined in 40 CFR 60.4248.

(e) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(a) <u>40 CFR 61, Subpart M - NESHAPs for Asbestos</u>
The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAPs) for Asbestos, 40 CFR 61, Subpart M (326 IAC 14), are not included in the permit for the stationary drum hot-mix asphalt plant, or portable RAP Crusher, since although the source intends to grind and process shingles at this plant, Dave O'Mara will purchase/use/process only supplier certified asbestos-free post consumer waste and/or factory seconds shingles in their aggregate mix. Accordingly, a condition limiting the use of asphalt shingles in the aggregate mix, to only those that are asbestos-free, is added to the permit.

(b) 40 CFR 63, Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines

The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Portable Reciprocating Internal Combustion Engines, 40 CFR 63.6580, Subpart ZZZZ (4Z) (326 IAC 20-84), are not included in the permit for the diesel fuel-fired portable RAP crusher, as follows:

Pursuant to 40 CFR 60.4219, *Stationary internal combustion engine (ICE)* means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary ICE is not a *nonroad engine* as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include; reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

See line items (c)(2)(A) and (c)(2)(B) in the above New Source Performance Standards (NSPS) review for the definition of nonroad engine. IDEM, OAQ has determined that based on information submitted by Dave O'Mara the portable RAP crusher may be considered a nonroad engine for the purposes of 40 CFR 63, Subpart ZZZZ applicability, provided it meets the requirements of paragraph (2)(iii) of the definition of nonroad engine in 40 CFR 1068.30. Therefore, the requirements of 40 CFR 60, Subpart ZZZZ are not applicable to the portable RAP crusher, provided it meets the following requirements:

(1) The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

(2) Any portable RAP crusher that replaces a portable RAP crusher at a location and that is intended to perform the same or similar function as the portable RAP crusher replaced will be included in calculating the consecutive time-period.

(3) For the purposes of this condition and pursuant to 40 CFR 1068.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.

(c) 40 CFR 63, Subpart DDDDD - NESHAPs for Industrial, Commercial, and Institutional Boilers, and Process Heaters

The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (5D) (326 IAC 20), are not included in the permit, since this source is not a major source of HAPs, and is not located at nor is a part of a major source of HAP emissions.

(d) 40 CFR 63, Subpart LLLLL - NESHAPs for Asphalt Processing and Asphalt Roofing Manufacturing

The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL (5L) (326 IAC 20-71), are not included in the permit, since the existing stationary drum hot-mix asphalt plant is still not an asphalt processing plant or an asphalt roofing manufacturing facility because it does not engage in the preparation of asphalt flux or asphalt roofing materials. Additionally, it is not a major source of HAPs, and is not located at nor is a part of a major source of HAP emissions.

(e) 40 CFR 63, Subpart JJJJJJ - NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources

(1) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ (6J), are still not included in the permit for the dryer/mixer burner since although this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, the dryer/mixer burner is a direct-fired process unit and not a boiler, as defined in 40 CFR 63.11237.

(2) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ (6J), are being removed from the permit for the two (2) No. 2 distillate fuel oil fired hot oil heaters, because although this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, and each hot oil heater fires No. 2 distillate fuel oil, each does not meet the definition of a boiler, as defined in §63.11237, since heat transfer oil and not water is used as the indirect heating media.

This is a revised requirement for this source. This is a Title I change.

(f) 40 CFR 63, Subpart AAAAAAA - NESHAP for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing

The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart AAAAAAA (7A) (326 IAC 20), are not included in the permit, because although the stationary drum hot-mix asphalt plant is an area source of hazardous air pollutant (HAP) emissions, as defined in §63.2, it does not meet the definition of an asphalt processing operation or an asphalt roofing manufacturing operation, as defined in §63.11566, since it does not engage in the preparation of asphalt flux or asphalt roofing materials.

(g) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination - Entire Source

The following state rules are applicable to the proposed revision:

(a) 326 IAC 2-8-4 (FESOP)

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See the "PTE of the Entire Source After Issuance of the FESOP Revision" Section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))

This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be limited to less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See the "PTE of the Entire Source After Issuance of the FESOP Revision" Section above.

(c) 326 IAC 2-3 (Emission Offset)

This modification to an existing minor portable source under 326 IAC 2-3 (Emission Offset) will not change the minor status, because although this existing portable source is authorized to relocate to all areas of the state except for any area designated as severe non-attainment area for ozone, or to Lake, LaPorte, or Porter counties, the potential to emit of all nonattainment regulated pollutants from the entire source will continue to be limited to less than 100 tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply. See the "PTE of the Entire Source After Issuance of the FESOP Revision" Section above.

(d) 326 IAC 1-7 (Stack Height)

The requirements of 326 IAC 1-7 (Stack Height) are removed from the permit because although the unlimited and uncontrolled PM10 and SO2 emissions from this existing source, are each greater than one hundred (100) tons per year, asphalt concrete plants are still specifically exempted under 326 IAC 1-7-5(c).

This is a revised requirement for this source. This is a Title I change.

(e) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and/or modified units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

(f) 326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this portable source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not approved to relocate to Lake, Porter, or LaPorte Counties, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.

This is a revised requirement for this source. This is a Title I change.

(g) 326 IAC 5-1 (Opacity Limitations)

This existing portable source is authorized to relocate to all areas of the state, except for any area designated as severe non-attainment area for ozone, or Lake, LaPorte, or Porter counties. Therefore, pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in any County except Lake, or the areas specified in (2)(A) through (G).

(2) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):

(A) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, and Oak Park);

(B) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);

(C) Dubois County (Bainbridge Township - the City of Jasper);

(D) Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);

(E) St. Joseph County (the area north of Kern Road and east of Pine Road);

(F) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and

(G) Vigo County (Indiana State University campus, 0.5 km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.

(3) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period, when the source is located in any County.

This condition is revised to reflect the portable status of the source and to include the requirements for Clark, Dearborn, Dubois, Marion, St. Joseph, Vanderburgh, and Vigo Counties. This is a Title I change.

(h) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
This existing portable source continues to be subject to the requirements of 326 IAC 6-4 (Fugitive Dust Emissions Limitations). Therefore, pursuant to 326 IAC 6-4, the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

(i) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This existing portable source continues to be subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations). Therefore, pursuant Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall continue to be controlled according to the Fugitive Dust Control Plan, included as Attachment A to the permit, when operating in the areas described in 326 IAC 6-5-1(a).

(j) 326 IAC 6.5 (PM Limitations Except Lake County)
This existing portable source is subject to the requirements of 326 IAC 6.5-1-2 because the potential to emit particulate matter (PM) before controls is greater than one hundred (100) tons per year and it has approval to relocate to Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County. Therefore, pursuant to 6.5-1-2(a), PM emissions from the drum mixer, dryer burner, hot oil heater, any systems for crushing, conveying, handling, screening, weighing, and/or storing materials such as aggregate, reclaimed asphalt pavement, recycled asphalt shingles, mineral filler, and asphalt concrete, and the loading, transfer, and storage systems associated with emission control systems, shall not exceed seven hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County.

This limitation is more stringent than the applicable requirement of four hundredths (0.04) grains per dry standard cubic foot established by 326 IAC 12 (New Source Performance Standards) (40 CFR 60, Subpart I Standards of Performance for Hot Mix Asphalt Facilities). Therefore, compliance with 326 IAC 6.5-1-2(a) will satisfy the grain loading limitation specified in 326 IAC 12 and 40 CFR 60, Subpart I.

This is an existing requirement for this source. This is a Title I change.

(k) 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)
This existing portable source has approval to relocate to Clark and Floyd Counties, and has the potential to emit volatile organic compounds (VOCs) greater than one hundred (100) tons per year. However, this source is not a stationary source, and has elected to limit VOC emissions to less than one hundred (100) tons per year in a federally enforceable permit. Therefore, the requirements of 326 IAC 8-7 do not apply to the 16,195 gallon asphalt emulsion storage tank and are not included in the permit.

(l) 326 IAC 12 (New Source Performance Standards)
See the Federal Rule Applicability Section of this TSD.

(m) 326 IAC 20 (Hazardous Air Pollutants)
See the Federal Rule Applicability Section of this TSD.

State Rule Applicability – Individual Facilities

Drum Mix Asphalt Plant - Propane Combustion

(a) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The potential to emit HAPs from the combustion of propane in the existing dryer burner is less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) do not apply to this proposed revision, and are not included in the in the permit.

(b) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The existing dryer burner is still not a source of indirect heating, as defined in 326 IAC 1-2-19 “Combustion for Indirect Heating”. Therefore, the requirements of 326 IAC 6-2 still do not apply, and are not included in the permit.

(c) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

See the "Material Handling - Recycled Shingles" section below for a discussion of the 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) applicability.

(d) 326 IAC 6.5 (PM Limitations Except Lake County)

See the "State Rule Applicability Determination - Entire Source" Section above.

(e) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)

The potential to emit SO2 from the combustion of propane in the existing dryer burner is less than twenty-five (25) tons/year, and ten (10) pounds/hour. However, the potential to emit SO2 from the combustion of No. 2 and No. 4 distillate fuel oil, each, is equal to or greater than twenty-five (25) tons/year, or ten (10) pounds/hour. Therefore, the requirements of 326 IAC 7-1.1 still apply, and are included in the permit.

See Appendix A.3 for the detailed calculations.

(f) 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)

Pursuant to 326 IAC 7-2-1(c), the source shall continue to submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO2 per MMBtu), to the OAQ upon request.

See Appendix A.3 for the detailed calculations.

(g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The VOC potential to emissions from the combustion of propane in the existing dryer burner is less than twenty-five (25) tons/year. Therefore, the requirements of 326 IAC 8-1-6 do not apply to the combustion of propane in the existing dryer burner, and are still not included in the permit.

See Appendix A.3 for the detailed calculations.

(h) 326 IAC 9-1 (Carbon Monoxide Emission Limits)

This existing portable, drum hot-mix asphalt plant is still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 do not apply and are not included in the permit.

(i) 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties

This existing portable source, authorized to relocate to Clark and Floyd counties, was constructed in 1998, after the effective date of May 13, 1996, and has potential and actual NOx emissions from the entire source of greater than one hundred (100) tons per year. However, this source is subject to the requirements of 40 CFR 60, Subparts I and OOO. Therefore, the requirements of 326 IAC 10-1 do not apply, and are not included in the permit.

(j) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)

The existing 104.0 MMBtu/hr dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it still has a maximum a heat input of less than two hundred

fifty million (250,000,000) British thermal units per hour (MMBtu/hr); therefore, it is still not subject to this rule and the requirements are not included in the permit.

(k) 326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The existing 104.0 MMBtu/hr dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-5-2(1), because it is still an external combustion unit and not an internal combustion engine.

Drum Mix Asphalt Plant - Material Handling

(a) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The existing portable drum hot mix asphalt plant, including the systems for handling, screening, storing, weighing and/or conveying hot aggregate (which includes slag and recycled shingles), is subject to 40 CFR 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities), which is incorporated by reference through 326 IAC 12. Therefore, pursuant to 326 IAC 6-3-1(c)(5), the dryer/mixer is not subject to the requirements of 326 IAC 6-3 because it is subject to the more stringent particulate limit established in 326 IAC 12.

(b) 326 IAC 6.5 (PM Limitations Except Lake County)
See the "State Rule Applicability Determination - Entire Source" Section above.

Diesel Fuel-Fired Portable Crusher

(a) 326 IAC 1-6-3 (Preventive Maintenance Plan (PMP))
A PMP is required for this unit and any associated control devices.

(b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit HAPs from the diesel fuel-fired, portable RAP crusher is less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) do not apply to this proposed revision, and are not included in the in the permit.

See Appendix A.3 for the detailed calculations.

(c) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The diesel fuel-fired portable RAP crusher is not a source of indirect heating, as defined in 326 IAC 1-2-19 “Combustion for indirect heating”. Therefore, the requirements of 326 IAC 6-2 do not apply, and are not included in this renewal.

(d) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the portable RAP crusher shall not exceed 58.51 pounds per hour when operating at a process weight rate of 200 tons (400,000 pounds) per hour. The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The source shall use wet suppression at all times the crusher, and any associated screens and/or conveyors, are in operation in order to comply with this limit.

See Appendix A.3 for the detailed calculations.

(e) 326 IAC 6.5 (PM Limitations Except Lake County)
See the "State Rule Applicability Determination - Entire Source" Section above.

(f) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The unlimited potential to emit SO2 from the diesel fuel-fired portable RAP crusher is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations) do not apply to this proposed revision, and are not included in the permit.

See Appendix A.3 for the detailed calculations.

(g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The unlimited VOC potential emissions from the diesel fuel-fired portable RAP crusher are less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 (General Reduction Requirements for New Facilities) do not apply to this proposed revision, and are not included in the permit.

See Appendix A.3 for the detailed calculations.

(h) There are no other 326 IAC 8 Rules applicable to the diesel fuel-fired portable crusher.

(i) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
The diesel fuel-fired portable RAP crusher is not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 (Carbon Monoxide Emission Limits) do not apply to this proposed revision, and are not included in the permit.

(j) 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties
This existing portable source, authorized to relocate to Clark and Floyd counties, was constructed in 1998, after the effective date of May 13, 1996, and has potential and actual NOx emissions from the entire source of greater than one hundred (100) tons per year. However, this source is subject to the requirements of 40 CFR 60, Subparts I and OOO. Therefore, the requirements of 326 IAC 10-1 do not apply, and are not included in the permit.

(k) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The diesel fuel-fired portable RAP crusher does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu). Therefore, the requirements of 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category) do not apply to this proposed revision, and are not included in the permit.

(l) 326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The diesel fuel-fired portable RAP crusher, approved for construction in 2013, does not meet the definition of an affected engine, as defined in 326 IAC 10-5-2(1), because although it is an internal combustion engine, it is not a large NOx SIP Call engine, as defined in 326 IAC 10-5-2(4), or a stationary internal combustion engine, as defined in 326 IAC 10-5-2(10).

Storage Tanks

(a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The potential to emit VOCs from the new 16,195 gallon asphalt emulsion storage tank is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply to the tank, and are not included in the in the permit.

(b) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The 16,195 gallon asphalt emulsion storage tank has a maximum storage capacity of less than 39,000 gallons and stores asphalt emulsion with a vapor pressure of less than 10.5 kPa (1.52 psia) at the highest calendar-month average storage temperature. Therefore, the requirements of 326 IAC 8-4-3 do not apply to this tank, and are not included in the permit.

(c) 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)
The requirements of 326 IAC 8-7 do not apply to the 16,195 gallon asphalt emulsion storage tank and are not included in the permit, since this source is not approved for operation in Lake County or Porter County, and the source has a potential to emit VOC of less than 100 tons per year.

(d) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
This existing portable source is currently located in Monroe County and the new 16,195 gallon asphalt emulsion storage tank has a maximum storage capacity of less than 39,000 gallons. However, this portable source is still authorized to relocate to Clark or Floyd Counties. Therefore, pursuant to 326 IAC 8-9-1(b), the storage tank is subject to the reporting and recordkeeping provisions of sections 6(a) and 6(b) of this rule, and is exempt from all other provisions of the rule, whenever the source is located in Clark or Floyd Counties.

(1) Pursuant to 326 IAC 8-9-6(b), the Permittee shall continue to maintain a record and submit to IDEM, OAQ a report containing the following information for each of the storage tanks whenever the source is located in Clark or Floyd Counties.

(A) the tank identification number;

(B) the tank dimensions; and

(C) the tank capacity.

(2) Pursuant to 326 IAC 8-9-6(a), these records shall be maintained for the life of the tank.

This is a new requirement for this source. This is a Title I change.

(e) There are no other 326 IAC 8 Rules that are applicable to the new 16,195 gallon asphalt emulsion storage tank.

Compliance Determination, Monitoring and Testing Requirements

(a) The compliance determination requirements applicable to this proposed revision are as follows:

(1) The fuel characteristics (i.e., sulfur content) and usage rate will be used to verify compliance with the SO2 emission limitations.

This is an existing requirement for this source.

(2) Shingle supplier certifications are used to document that the shingles do not contain asbestos.

This is a new requirement for this source. This is a Title I change.

(b) The testing requirements applicable to this proposed revision are as follows:

Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
RAP Crusher and associated conveyors, screens, and material transfer points	N/A	Opacity	Within 180 days after initial use(3)	Once every five (5) years

These testing requirements are required for compliance with 40 CFR 60, Subpart OOO, and 326 IAC 2-8 (FESOP), for fugitive emissions from affected facilities without water sprays. Testing shall only be performed if the company has not previously performed testing on this unit at one of their other Indiana facilities. Additionally, affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.

(c) The compliance monitoring requirements applicable to this proposed revision are as follows:

Emission Unit & Control Device	Parameter	Frequency	Range/Rate	Excursions and Exceedances
RAP Crusher and associated conveyors, screens, and material transfer points	Visible Emissions	Once per day	normal/abnormal	Response Steps

These monitoring conditions are necessary to ensure compliance with 40 CFR 60, Subpart OOO, and 326 IAC 2-8 (FESOP), and the limits that render 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

All other existing compliance determination, monitoring, and testing requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in the FESOP.

Proposed Changes

(a) The following changes listed below are due to the proposed revision:

(1) Section A.1 - General Information, the source description has been revised to include the use of slag and shingles in the aggregate mix, to include the new RAP crushing and shingle grinding activities, and to indicate that this portable drum-mix asphalt plant also produces cold-mix asphalt, and does not use blast furnace slag in the aggregate mix.

(2) Sections A.2 - Emission Units and Pollution Control Equipment Summary, D.1 - Emission Unit Operation Conditions (for the Hot-Mix Asphalt Plant), and Section E.1 - Facility Operation Conditions(for the Hot-Mix Asphalt Plant), renamed NSPS Requirements, has been revised incorporate propane as an approved fuel for combustion in the dryer burner into the asphalt plant emission unit description, and to add the two (2) new screen decks, the new portable RAP Crusher and shingles storage piles, and the new asphalt emulsion storage tank, have been added to the emission unit list. Additionally, the statement pertaining to the source not grinding shingles has been removed.

(3) Section A.3 - Insignificant Activities to has been revised to include a description of the new asphalt emulsion storage tank;

(4) Section D.1 - Fuel and Slag Limits, subsection (c) Single Fuel Usage Limitations, has been revised to update the natural gas usage limit *(to be equivalent to the unlimited fuel usage)* and to include a new propane fuel usage limit *(equivalent to the unlimited fuel usage)* to assist Dave O'Mara in maintaining compliance with the annual SO2 and NOx emission limits.

(5) Section D.1 - Fuel and Slag Limits, subsection (d) Multiple Fuel Usage Limitations, has been revised to update the NOx emission limit.

(6) Section D.1 - Hazardous Air Pollutants (HAP) has been revised to reference shingle grinding.

(7) A new Section D - Particulate Emission Limits has been added to incorporate the requirements of 326 IAC 6-3 for the portable RAP crusher.

(8) Section D.1 Multiple Fuel Usage / Sulfur Dioxide (SO2) and Nitrogen Oxide (NOx) Emissions, renamed as Multiple Fuel & Slag Usage / Sulfur Dioxide (SO2) and Nitrogen Oxide (NOx) Emissions throughout the permit, has been revised to incorporate the addition of propane;

(9) Section D.3 - Facility Operation Conditions has been revised to include a description of the new asphalt emulsion storage tank, and to add the new emulsion tank to the requirements of 326 IAC 8-9;

(10) A New Section E.2: NSPS Requirements (for the Portable RAP Crusher) has been added to the permit to list the applicable sections of 40 CFR 60, Subpart OOO, for the portable RAP Crusher, and a copy of the rule has been attached to the back of the permit;

(11) A new Section E.3 - NSPS & NESHAPS Requirements (for the Portable RAP Crusher), has been added to remind Dave O'Mara that in order to render the requirements of 40 CFR 60, Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines, and 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, not applicable to the portable RAP Crusher, the on-site residence time of the unit must be limited;

(12) The FESOP Quarterly Report Form for Single Fuel Usage, located at the back of the permit, has been revised to include the new propane usage limitation;

(13) The FESOP Quarterly Report Forms for SO2 and NOx emissions, located at the back of the permit, have been revised to update the annual NOx emissions limit and to remove the formula, instead referencing the Compliance Determination Requirements in Section D.1 - Multiple Fuel & Steel Slag Usage / Sulfur Dioxide (SO2) Emissions, to remove redundancy. Additionally, rows for tracking propane usage have been added to the table on the second page of the form;

(14) A new FESOP Quarterly Report Form has been added to assist Dave O'Mara in tracking the on-site residence time of the portable RAP crusher.

(b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions:

(1) Sections A.2 - Emission Units and Pollution Control Equipment Summary, Section D.1 - Facility Operation Conditions (for the Drum-Mix Asphalt Plant), and Section E.1 - Facility Operation Conditions, renamed as NSPS Requirements (for the HMA Plant), have been revised to clarify which (regulated) materials are processed, crushed, and/or ground at this stationary source.

(2) Sections A.2 - Emission Units and Pollution Control Equipment Summary, D.1 - Facility Operation Conditions (for the Drum-Mix Asphalt Plant), and E.1 - Facility Operation Conditions, renamed as NSPS Requirements (for the Drum-Mix Asphalt Plant), have been revised to correct several emission unit descriptions to reflect actual operating conditions

(3) Sections A.3 - Insignificant Activities, and D.3 - Insignificant Activities, have been revised to remove the statement regarding NESHAP Subpart JJJJJJ applicability from the hot oil heater emission unit description, since the two (2) hot oil heaters are not boilers under the rule. Additionally, existing Section E.2 - Facility Operation Conditions for the Boilers (Hot Oil Heaters) and existing Permit Attachment C (copy of the rule) have been deleted.

(4) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule cites listed in the permit. These changes are not changes to the underlining provisions. IDEM, OAQ has clarified the rule cites for the Section B - Preventive Maintenance Plan. The change is only to the citations of these rules in Section B - Operational Flexibility.

(5) IDEM, OAQ has added the Southwestern Regional Office to Section B - Emergency Provisions.

(6) IDEM has revised Section C - Opacity to reflect the portable status of the source and to include the requirements for Clark, Dearborn, Dubois, Marion, St. Joseph, Vanderburgh, and Vigo Counties.

(7) IDEM, OAQ has removed Section C - Stack Height from the permit since the rule is not applicable to asphalt concrete plants.

(8) IDEM, OAQ has clarified Section C - Instrument Specifications to indicate that the analog instrument must be capable of measuring the parameters outside the normal range.

(9) IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping in Section C - General Record Keeping Requirements. Additionally, IDEM added "where applicable" to the lists in Section C - General Record Keeping Requirements to more closely match the underlying rule.

(10) IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions in Section C - General Reporting Requirements and the Quarterly Deviation and Compliance Monitoring Report Form at the back of the Permit.

(11) IDEM has revised Section C - Relocation of Portable Sources to remove LaPorte County as an approved county of access.

(12) Existing sections D.1 - Particulate Matter (PM), and D.1 - FESOP Limits, have been revised to reflect the decrease in the dryer/mixer process pound per ton (lb/ton) emission limits for PM, PM10, and PM2.5. Additionally, references to 326 IAC 2-3 (emission Offset) have been added throughout Section D.1 to show that the limits in the permit also ensure compliance in nonattainment counties.

(13) Existing section D - Particulate Emission Limits has been revised to indicate that the requirements of 326 IAC 6.5 also apply to the hot oil heater, any systems for crushing, conveying, handling, screening, weighing, and/or storing materials such as aggregate, reclaimed asphalt pavement, recycled asphalt shingles, mineral filler, and asphalt concrete, and the loading, transfer, and storage systems associated with emission control systems.

(14) Existing section D - Multiple Fuel Usage / Sulfur Dioxide (SO2) and Nitrogen Oxide (NOx) Emissions, renamed as Multiple Fuel & Slag Usage / Sulfur Dioxide (SO2) and Nitrogen Oxide (NOx) Emissions, subsection (a)(1) Sulfur Dioxide emission calculation, has been revised to the correct the No. 4 fuel oil emission factor; and

(15) IDEM, OAQ, has decided to clarify Section D.1 - Parametric Monitoring.

(16) Existing section E.2: NSPS Requirements (for Boilers (Hot Oil Heaters)) has been removed from the permit, since the rule does not apply, and the copy of the rule previously attached to the back of the permit, has been removed.

Unaffected permit conditions have been re-numbered and the Table of Contents updated, as applicable. The Permit has been revised as follows, with deleted language shown as ~~strikeouts~~ and new language **bolded**.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a portable hot drum-mix asphalt plant **and cold-mix asphalt production operation**. **Electric arc furnace steel mill slag (steel slag) and asbestos-free recycled asphalt shingles (RAS) are included in the aggregate mix. Recycled asphalt**

pavement (RAP) is crushed and certified asbestos-free recycled asphalt shingles (RAS) are ground on-site. This source does not process blast furnace slag.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This portable source consists of the following emission units and pollution control devices:

(a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 400 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of **104.0**~~120~~ million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, ~~or~~ residual No. 4 fuel oil, **or propane, including**~~processing~~ steel slag and certified asbestos-free factory second shingles in the aggregate mix, using one (1) baghouse for particulate control, and exhausting to stack SV1. ~~No grinding of shingles occurs at this source~~.

(b) Material handling and conveying operations, consisting of the following:

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(6) Two (2) **virgin aggregate** collecting conveyors.

(7) Three (3) **virgin aggregate** transfer conveyors.

(8) One (1) virgin aggregate, two (2) product screen deck, approved for construction in 2013; and

(9) One (1) recycle materials, two (2) product screen deck, approved for construction in 2013.

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(c) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour, and including:

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(1) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres.

(**d**~~c~~) Cold-mix cutback asphalt production and storage piles, approved for construction in 2010.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This portable source also includes the following insignificant activities:

(a) Two (2) hot oil heaters, approved for construction in 2010, with a maximum heat input capacity of 1.0 MMBtu per hour, each, firing natural gas or No. 2 fuel oil.

~~Under NESHAP Subpart JJJJJJ, the hot oil heaters are considered affected facilities.~~

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(f) One (1) 16,195 gallon asphalt emulsion storage tank, identified as AET-0233, approved for construction in 2013.

(**g**~~f~~) Paved and unpaved roads and parking lots with public access.

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B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]~~[326 IAC 2-8-5(a)(1)]~~

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B.12 Emergency Provisions [326 IAC 2-8-12]

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(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Southeast Regional Office **and Southwest Regional Office**, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.

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B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) **and (c)** ~~through (d)~~ without a prior permit revision, if each of the following conditions is met:

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(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)~~(2), (c)(1), and (d)~~**(1) and (c)**. The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)~~(2), (c)(1), and (d)~~ **(b)(1) and (c)**.

(b) Emission Trades [326 IAC 2-8-15~~(c)~~**(b)**]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15~~(c)~~**(b)**.

(c) Alternative Operating Scenarios [326 IAC 2-8-15~~(d)~~**(c)**]

****

C.3 Opacity [326 IAC 5-1]

****

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4**, when the source is located in any County except Lake or the areas specified in Conditions C.3(b)(1) through (7)**.

(b) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):

(1) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, Oak Park);

(2) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);

(3) Dubois County (Bainbridge Township - the City of Jasper);

(4) Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);

(5) St. Joseph County (the area north of Kern Road and east of Pine Road);

(6) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and

(7) Vigo County (Indiana State University campus, 0.5km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.

(**c**~~b~~) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

****

C.8 **Reserved**~~Stack Height [326 IAC 1-7]~~

~~The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.~~

****

C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. **The analog instrument shall be capable of measuring values outside of the normal range.**

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****

C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports**,** and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. ~~These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.~~

(1) Support information includes the following, where applicable:

(A) All calibration and maintenance records.

(B) All original strip chart recordings for continuous monitoring instrumentation.

(C) Copies of all reports required by the FESOP.

(2) Records of required monitoring information include the following, where applicable:

(A) The date, place, as defined in this permit, and time of sampling or measurements.

(B) The dates analyses were performed.

(C) The company or entity that performed the analyses.

(D) The analytical techniques or methods used.

(E) The results of such analyses.

(F) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

****

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. **Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph**. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

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****

C.20 Relocation of Portable Sources [326 IAC 2-14-4]

(a) This permit is approved for operation in all areas of Indiana**,** except in severe nonattainment areas for ozone**, or**~~and~~ in Lake**, LaPorte, or**~~and~~ Porter Counties. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.

****

****

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: **Portable Drum-Mix Asphalt Plant**

(a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 400 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of **104.0**~~120~~ million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, ~~or~~ residual No. 4 fuel oil, **or propane, including**~~processing~~ steel slag and certified asbestos-free factory second shingles in the aggregate mix, using one (1) baghouse for particulate control, and exhausting to stack SV1. ~~No grinding of shingles occurs at this source~~.;

(b) Material handling and conveying operations, consisting of the following:

****

(6) Two (2) **virgin aggregate** collecting conveyors.

(7) Three (3) **virgin aggregate** transfer conveyors.

(8) One (1) virgin aggregate, two (2) product screen deck, approved for construction in 2013; and

(9) One (1) recycle materials, two (2) product screen deck, approved for construction in 2013.

(c) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed aspha pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour, and including:

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(1) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres.

****

****

D.1.1 Particulate Matter (PM) [326 IAC 2-2]

****

(b) PM emissions from the dryer/mixer shall not exceed **0.201**~~0.202~~ pounds per ton of asphalt produced.

****

D.1.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2]**[326 IAC 2-3]** [326 IAC 8-1-6]

Pursuant to 326 IAC 2-8-4, **and in order to render the requirements of 326 IAC 2-7, 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 8-1-6 not applicable,** the Permittee shall comply with the following:

****

(b) PM10 emissions from the dryer/mixer shall not exceed **0.115**~~0.116~~ pounds per ton of asphalt produced.

(c) PM2.5 emissions from the dryer/mixer shall not exceed **0.175**~~0.176~~ pounds per ton of asphalt produced.

****

When combined with the limited potential to emit PM10, PM2.5, CO, and VOC from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of PM10, PM2.5, CO, and VOC to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program) ~~and~~ 326 IAC 2-2 (PSD)**, and 326 IAC 2-3 (Emission Offset),** not applicable.

D.1.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the dryer/mixer**, hot oil heater, any systems for crushing, conveying, handling, screening, weighing, and/or storing materials such as aggregate, reclaimed asphalt pavement, recycled asphalt shingles, mineral filler, and asphalt concrete,**

and the loading, transfer, and storage systems associated with emission control systems, shall not exceed 0.03 grain per dry standard cubic foot of exhaust air when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

****

D.1.4 Fuel and Slag Limits [326 IAC 2-8-4][326 IAC 2-2]**[326 IAC 2-3]**

Pursuant to 326 IAC 2-8-4, **and in order to render the requirements of 326 IAC 2-7, 326 IAC 2-2, and 326 IAC 2-3 not applicable,** the Permittee shall comply with the following:

(a) **Slag Usage Limitation**

Steel slag usage shall not exceed 150,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

****

(c) Single Fuel Usage Limitations

When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner the usage of fuel shall be limited as follows:

(1) Natural gas usage shall not exceed **911**~~1,028.93~~ million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

****

(4) Propane usage shall not exceed 10,066,740 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Multiple Fuel **& Slag** Usage Limitations

****

(2) NOx emissions from the dryer/mixer shall not exceed **86.55**~~97.75~~ tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

****

****

D.1.6 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4][326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, **and in order to render the requirements of 326 IAC 2-7 and 326 IAC 2-4.1 not applicable,** ~~and in order to limit HAP emissions from the dryer/mixer,~~ the Permittee shall ~~use~~ only **grind and process** certified asbestos-free factory second **and/or post consumer waste** shingles as an additive in its aggregate mix.

Compliance with these limits, combined with the limited PTE **HAPs** from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than 10 tons per 12 consecutive month period, and any combination of HAPs to less than 25 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

D.1.7 Particulate Emission Limits [326 IAC 6-3]

When not located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County, pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the portable RAP crusher shall not exceed 58.51 pounds per hour when operating at a process weight rate of 200 tons (or 400,000 pounds) per hour. The pound per hour limitation was calculated as follows:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ **where E = rate of emission in pounds per hour; and**
P = process weight rate in tons per hour

The Permittee shall use wet suppression at all times the crusher, and any associated screens and/or conveyors, are in operation in order to comply with this limit.

D.1.**8**~~7~~ Preventive Maintenance Plan [326 IAC 2-8-4(9)]

****

D.1.**9**~~8~~ Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

****

D.1.**10**~~9~~ Sulfur Dioxide Emissions and Sulfur Content

****

D.1.**11**~~10~~ Particulate Matter (PM, PM10, and PM2.5) Control

****

D.1.**12**~~11~~ Multiple Fuel **& Slag** Usage / Sulfur Dioxide (SO2) and Nitrogen Oxide (NOx) Emissions

(a) In order to determine compliance with Condition D.1.4(d)(1) - Fuel and Slag Limits, when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and in conjunction with the use of steel slag in the aggregate mix, the Permittee shall use the following equation to determine the tons of SO2 emitted per twelve (12) consecutive month period:

(1) Sulfur Dioxide emission calculation

$$S = \frac{F(E_F) + R(E_R) + G(E_G) \mathbf{+ P(E_P)} + L(E_L)}{2000 \text{ lbs/ton}}$$

Where:

****

P = gallons of propane used in the dryer/mixer in last twelve (12) months

****

Emission Factors:

****

E_R = **0.075**~~0.24~~ pounds per gallon of No. 4 fuel oil

E_P = 0.00002 pounds per gallon of propane

****

(b) In order to determine compliance with Condition D.1.4(d)(2) - Fuel and Slag Limits, when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the Permittee shall use the following equation to determine the tons of NOx emitted per twelve (12) consecutive month period:

(1) Nitrogen Oxide emission calculation

$$N = \frac{F(E_F) + R(E_R) + G(E_G) \mathbf{+ P(E_P)}}{2000 \text{ lbs/ton}}$$

Where:

****

P = gallons of propane used in the dryer/mixer in last twelve (12) months

Emission Factors:

****

E_P = 0.013 pounds per gallon of propane

****

D.1.**13**~~12~~ Asbestos Content

****

D.1.**14**~~13~~ Visible Emissions Notations

****

D.1.**15**~~14~~ Baghouse Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer at least once per day when the drying/mixing process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range**, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between** ~~of~~ 3.0 and 5.0 inches of water**, unless a different upper-bound or lower-bound value for this** ~~or a~~ range ~~established~~ **is determined** during the latest stack test~~, the Permittee shall take reasonable response~~. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

****

D.1.**16**~~15~~ Broken or Failed Bag Detection

****

D.1.**17**~~16~~ Record Keeping Requirements

****

(e) To document the compliance status with Condition D.1.**14**~~13~~ - Visible Emission Notations, the Permittee shall maintain records of the daily visible emission notations of the aggregate dryer/burner stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (i.e., the process did not operate that day).

(f) To document the compliance status with Condition D.1.**15**~~14~~ - Parametric Monitoring, the Permittee shall maintain records of the once per day pressure drop during reading. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(g) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.**18**~~17~~ Reporting Requirements

****

****

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

Insignificant Activities

(a) Two (2) hot oil heaters, approved for construction in 2010, with a maximum heat input capacity of 1.0 MMBtu per hour, each, firing natural gas or No. 2 fuel oil.

~~Under NESHAP Subpart JJJJJJ, the hot oil heaters are considered affected facilities.~~

****

(f) One (1) 16,195 gallon asphalt emulsion storage tank, identified as AET-0233, approved for construction in 2013.

(**g**~~f~~) Paved and unpaved roads and parking lots with public access.

****

****

D.3.3 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for the storage tanks (G-0233, A-0233, F-0233, ~~and~~ U-0233**, and AET-0233**) when the source is located in Clark or Floyd Counties:

****

****

SECTION E.1 **NSPS REQUIREMENTS**~~FACILITY OPERATION CONDITIONS~~

Facility Description [326 IAC 2-8-4(10)]: **Portable Drum-Mix Asphalt Plant**

(a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 400 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of **104.0**~~120~~ million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, ~~or~~ residual No. 4 fuel oil, **or propane, including**~~processing~~ steel slag and certified asbestos-free factory second shingles in the aggregate mix, using one (1) baghouse for particulate control, and exhausting to stack SV1. ~~No grinding of shingles occurs at this source~~.;

(b) Material handling and conveying operations, consisting of the following:
****

(6) Two (2) **virgin aggregate** collecting conveyors.

(7) Three (3) **virgin aggregate** transfer conveyors.

(8) One (1) virgin aggregate, two (2) product screen deck, approved for construction in 2013; and

(9) One (1) recycle materials, two (2) product screen deck, approved for construction in 2013.

****

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

****

SECTION E.2 NSPS REQUIREMENTS

Facility Description [326 IAC 2-8-4(10)]: Portable RAP Crusher

(c) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed aspha pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour, and including:

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(1) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart OOO.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.2.2 NSPS Subpart OOO Requirements - Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12-1]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included as Attachment C of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart OOO, for the RAP Crusher:

(1) 40 CFR 60.670(a), (d), (e), and (f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(b), (d), and (e)
(4) 40 CFR 60.673
(5) 40 CFR 60.674(b)
(6) 40 CFR 60.675(a), (c)(1)(i), (ii), (iii), (c)(3), (d), (e), (g), and (i)
(7) 40 CFR 60.676(a), (b)(1), (f), (h), (i), (j), and (k)
(8) Table 1 and Table 3

E.2.3 Testing Requirements [40 CFR Part 60, Subpart OOO] [326 IAC 12-1] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition E.2.2, the Permittee shall perform testing for fugitive emissions from affected facilities without water sprays, as required under NSPS 40 CFR 60, Subpart OOO, not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Note: Pursuant to §60.674(b)(1), affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.

****

~~SECTION E.2 FACILITY OPERATION CONDITIONS~~

~~Emissions Unit Description: Boilers (Hot Oil Heaters)~~

~~(a) Two (2) hot oil heaters, approved for construction in 2010, with a maximum heat input capacity of 1.0 MMBtu per hour, each, firing natural gas or No. 2 fuel oil.~~

~~Under NESHAP Subpart JJJJJJ, the hot oil heaters are considered affected facilities.~~

~~(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)~~

~~National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]~~

~~E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]~~

~~(a) Pursuant to §63.11130, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 8 of 40 CFR Part 63, Subpart JJJJJJ, and in accordance with the schedule in 40 CFR 63 Subpart JJJJJJ.~~

~~(b) Pursuant to 40 CFR 63.12, the Permittee shall submit all required notifications and reports to:~~

~~Indiana Department of Environmental Management~~
~~Compliance and Enforcement Branch, Office of Air Quality~~
~~100 North Senate Avenue~~
~~MC 61-53 IGCN 1003~~
~~Indianapolis, Indiana 46204-2251~~

~~E.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Industrial, Commercial, and Institutional Boilers Area Sources [40 CFR 63, Subpart JJJJJJ] [326 IAC 20]~~

~~Pursuant to 40 CFR § 63.11112(a), the emission sources to which this subpart applies are each new, reconstructed, or existing industrial, commercial, and/or institutional boiler within a subcategory (coal, biomass, oil), as listed in §63.11200 and defined in §63.11237, located at an area source.~~

~~The two (2) hot oil heaters are therefore subject to the following portions of Subpart JJJJJJ (6J) (included as Attachment C of this permit):~~

~~(A) 40 CFR 63.11193;~~
~~(B) 40 CFR 63.11194(a)(1),(b),(e);~~
~~(C) 40 CFR 63.11196(a)(1);~~
~~(D) 40 CFR 63.11200;~~
~~(E) 40 CFR 63.11201(b),(d);~~
~~(F) 40 CFR 63.11205(a);~~
~~(G) 40 CFR 63.11210(c);~~
~~(H) 40 CFR 63.11214(b);~~
~~(I) 40 CFR 63.11223(a),(b)(1) - (7);~~
~~(J) 40 CFR 63.11225(a),(b),(c),(d),(g);~~
~~(K) 40 CFR 63.11235~~
~~(L) 40 CFR 63.11236~~
~~(M) 40 CFR 63.11237~~
~~(N) Table 2~~
~~(O) Table 8~~

****

SECTION E.3 NSPS & NESHAP REQUIREMENTS

Facility Description [326 IAC 2-8-4(10)]: Portable RAP Crusher

(k) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed aspha pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]

E.3.1 Nonroad Engines [326 IAC 12][40 CFR 60, Subpart IIII][326 IAC 20-82][40 CFR 63, Subpart ZZZZ] [40 CFR 1068.30]

In order to render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII, which are incorporated by reference as 326 IAC 12, and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), which are incorporated by reference as 326 IAC 20-82, not applicable, and to ensure the portable RAP crusher is a nonroad engine, as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), the Permittee shall comply with the following:

(a) The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

(b) Any portable RAP crusher that replaces a portable RAP crusher at a location and that is intended to perform the same or similar function as the portable RAP crusher replaced will be included in calculating the consecutive time period.

(c) For the purposes of this condition, and pursuant to 40 CFR 1069.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.

Compliance with these limits shall render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII) and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) not applicable.

E.3.2 Record Keeping Requirements

(a) To document the compliance status with Condition E.3.1(a), the Permittee shall maintain records of the dates of installation and removal of the portable RAP crusher as the unit is installed and removed.

(b) To document the compliance status with Condition E.3.1(b), the Permittee shall maintain records of the make, model, horsepower rating, manufacture date, and model year of each portable RAP crusher brought onto the site.

(c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

E.3.3 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions E.3.1(a) and E.3.1(b), shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1)by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

****

FESOP Quarterly Report

Parameter: Single fuel usage

Limit: When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner the usage of fuel shall be limited as follows:

Fuel Type (units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet)	**911**~~1,028.93~~
No. 2 fuel oil (gallons)	2,660,632
No. 4 fuel oil (gallons)	787,104
Propane (gallons)	**10,066,740**

****

FESOP Quarterly Report

Facility: Dryer/mixer ~~burner and steel slag processing~~

Parameter: SO2 and NOx emissions

Limit: *SO2 emissions* from the dryer/mixer shall not exceed 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month**, using the equation found in Condition D.1.12(a)(1)**.

NOx emissions from the dryer/mixer shall not exceed **86.55**~~97.75~~ tons per twelve (12) consecutive month period, with compliance determined at the end of each month**, using the equation found in Condition D.1.12(b)(1)**.

~~Sulfur dioxide (SO2) emissions shall be determined using the following equation:~~

$$\cancel{S = \frac{F(E_F) + R(E_R) + G(E_G) + L(E_L)}{2000\ \text{lbs/ton}}}$$

~~Where:~~	~~Emission Factors:~~
~~S = tons of sulfur dioxide emissions for twelve (12) month consecutive period~~ ~~F = gallons of No. 2 fuel oil used in last twelve (12) months~~ ~~R = gallons of No. 4 fuel oil used in last twelve (12) months~~ ~~G = million cubic feet of natural gas used in last twelve (12) months~~ ~~L = tons of steel slag used in last twelve (12) months with less than or equal to sixty-six hundredths percent (0.66%) sulfur content~~	~~E_F = 0.071 pounds per gallon of No. 2 fuel oil~~ ~~E_R = 0.24 pounds per gallon of No. 4 fuel oil~~ ~~E_G = 0.6 pounds per million cubic feet of natural gas~~ ~~E_L = 0.0014 pounds per ton of steel slag processed~~

~~Nitrogen Oxide (NOx) emissions shall be determined using the following equation:~~

$$\cancel{N = \frac{F(E_F) + R(E_R) + G(E_G)}{2000\ \text{lbs/ton}}}$$

~~Where:~~	~~Emission Factors:~~
~~N = tons of nitrogen oxide emissions for twelve (12) month consecutive period~~ ~~F = gallons of No. 2 fuel oil used in last twelve (12) months~~ ~~R = gallons of No. 4 fuel oil used in last twelve (12) months~~ ~~G = million cubic feet of natural gas used in last twelve (12) months~~	~~E_F = 0.024 pounds per gallon of No. 2 fuel oil~~ ~~E_R = 0.047 pounds per gallon of No. 4 fuel oil~~ ~~E_G = 190 pounds per million cubic feet of natural gas~~

FESOP Fuel Usage and SO2/NOx Emissions Quarterly Reporting Form

QUARTER: _____ YEAR: _____

Month	Fuel Types/Slag (units)	Column 1	Column 2	Column 1 + Column 2	Total SO2 Emissions From All Fuels Used and Slag (tons per 12 month consecutive period)	Total NOx Emissions From All Fuels Used (tons per 12 month consecutive period)
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total		
Month 1	Natural gas (mmcf)					
	No. 2 fuel oil (gallons)					
	No. 4 fuel oil (gallons)					
	Propane (gallons)					
	Steel Slag (tons)					
Month 2	Natural gas (mmcf)					
	No. 2 fuel oil (gallons)					
	No. 4 fuel oil (gallons)					
	Propane (gallons)					
	Steel Slag (tons)					
Month 3	Natural gas (mmcf)					
	No. 2 fuel oil (gallons)					
	No. 4 fuel oil (gallons)					
	Propane (gallons)					
	Steel Slag (tons)					

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Dave O'Mara Contractor Plant 0233
Source Address: Portable
FESOP Permit No.: F119-21451-05234
Facility: RAP Crusher
Parameter: Residence Time
Limit: The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

Manufacture Date: _____ **Installation Date:** _____

Make: _____ **Removal Date:** _____

Model: _____ **Model Year:** _____

Horsepower Rating: _____ **MMBtu/hr Rating:** _____

QUARTER:_____ **YEAR:**_____

Month	Column 1	Column 2	Column 1 - Column 2
	Number of Days Onsite This Month	Number of Days Onsite Previous 11 Months	12 Month Total Number of Days Onsite
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title / Position:_____

Signature: _____

Date: _____

Phone: _____

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

****

This report shall be submitted quarterly based on a calendar year. **Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C - General Reporting.** Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

****

No other changes have been made to the permit as a result of this revision.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on April 4, 2013.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 105-33049-05234. The staff recommends to the Commissioner that this FESOP Significant Permit Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-9327 or toll free at 1-800-451-6027 extension 3-9327.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A.1: Unlimited Emissions Calculations
Entire Source - Drum Mix

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Asphalt Plant Maximum Capacity - Drum Mix

Maximum Hourly Asphalt Production =	400	ton/hr								
Maximum Annual Asphalt Production =	3,504,000	ton/yr								
Maximum Annual Blast Furnace Slag Usage =	0	ton/yr	0	% sulfur						
Maximum Annual Steel Slag Usage =	1,471,680	ton/yr	0.66	% sulfur						
Maximum Dryer Fuel Input Rate =	104.0	MMBtu/hr								
Natural Gas Usage =	911	MMCF/yr								
No. 2 Fuel Oil Usage =	6,507,429	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	6,507,429	gal/yr, and	1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	10,066,740	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	0	gal/yr, and	0	% sulfur	0	% ash	0	% chlorine,	0	% lead
Diesel Fuel Usage - Generator < 600 HP =	0	gal/yr,and								
Diesel Fuel Usage - Generator > 600 HP =	0	gal/yr	0.00	% sulfur						
Unlimited PM Dryer/Mixer Emission Factor =	28.0	lb/ton of asphalt production								
Unlimited PM10 Dryer/Mixer Emission Factor =	6.5	lb/ton of asphalt production								
Unlimited PM2.5 Dryer/Mixer Emission Factor =	1.5	lb/ton of asphalt production								
Unlimited VOC Dryer/Mixer Emission Factor =	0.032	lb/ton of asphalt production								
Unlimited CO Dryer/Mixer Emission Factor =	0.13	lb/ton of asphalt production								
Unlimited Blast Furnace Slag SO2 Dryer/Mixer Emission Factor =	0	lb/ton of slag processed								
Unlimited Steel Slag SO2 Dryer/Mixer Emission Factor =	0.0014	lb/ton of slag processed								

Unlimited/Uncontrolled Emissions

	Unlimited/Uncontrolled Potential to Emit (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**CO_2e**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions											
Dryer Fuel Combustion (worst case)	22.78	27.01	27.01	780.89	152.92	5.03	38.26	78,849.25	1.40	0.82	(hydrogen chloride)
Dryer/Mixer (Process)	49,056.00	11,388.00	2,628.00	101.62	96.36	56.06	227.76	58,257.50	18.68	5.43	(formaldehyde)
Dryer/Mixer Slag Processing (worst case)	0	0	0	1.03	0	0	0	0.00	0	0	
Hot Oil Heater Fuel Combustion/Process (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,752.00	0.020	0.016	(hexane)
Diesel-Fired Generator < 600 HP * (crusher)	0	0	0	0	0	0	0	0	0	0	
Diesel-Fired Generator > 600 HP	0	0	0	0	0	0	0	0	0	0	
Worst Case Emissions**	**49,056.13**	**11,388.21**	**2,628.21**	**786.36**	**154.18**	**56.11**	**228.50**	**80,601.25**	**18.70**	**5.43**	(formaldehyde)
Fugitive Emissions											
Asphalt Load-Out, Silo Filling, On-Site Yard	1.94	1.94	1.94	0	0	30.01	5.05	0	0.50	0.16	(formaldehyde)
Material Storage Piles	3.76	1.32	1.32	0	0	0	0	0	0	0	
Material Processing and Handling	11.32	5.35	0.81	0	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	55.59	20.31	20.31	0	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	124.41	31.71	3.17	0	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	42,109.32	0	0	10,983.67	3,789.84	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	0	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	0	
Total Fugitive Emissions	**197.02**	**60.62**	**27.54**	**0.00**	**0.00**	**42,139.33**	**5.05**	**0.00**	**10,984.17**	**3,789.84**	(xylenes)
Totals Unlimited/Uncontrolled PTE	**49,253.14**	**11,448.83**	**2,655.75**	**786.36**	**154.18**	**42,195.44**	**233.54**	**80,601.25**	**11,002.87**	**3,789.84**	(xylenes)

negl = negligible
Worst Case Fuel Combustion is based on the fuel with the highest emissions for each specific pollutant.
Fuel component percentages provided by the source.
* The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.
**Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Worst Case Emissions From Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP

Appendix A.1: Unlimited Emissions Calculations
Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer at the source.

Maximum Capacity

Maximum Fuel Input Rate =	104	MMBtu/hr								
Natural Gas Usage =	911	MMCF/yr								
No. 2 Fuel Oil Usage =	6,507,429	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	6,507,429	gal/yr, and	1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0.00	% sulfur						
Propane Usage =	10,066,740	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0.00	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)							Unlimited/Uncontrolled Potential to Emit (tons/yr)							
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	7.0	3.22	0.5	0.6	0.0	0.87	6.51	22.78	0.00	2.52	0.00	0.00	**22.78**
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	0	3.46	10.74	27.01	0.00	2.52	0.00	0.00	**27.01**
SO2	0.6	71.0	240.0	0.0	0.020	0.000	0.0	0.27	231.01	780.89	0.00	0.10	0.00	0.00	**780.89**
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	86.55	78.09	152.92	0.00	65.43	0.00	0.00	**152.92**
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.51	0.65	0.65	0.00	5.03	0.00	0.00	**5.03**
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	38.26	16.27	16.27	0.00	37.75	0.00	0.00	**38.26**
Hazardous Air Pollutant															
HCl							0.0							0.00	**0.00**
Antimony			5.25E-03	5.25E-03			negl			1.71E-02	0.00E+00			negl	**1.7E-02**
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	9.1E-05	1.82E-03	4.29E-03	0.00E+00			0.00E+00	**4.3E-03**
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	5.5E-06	1.37E-03	9.05E-05	0.00E+00			negl	**1.4E-03**
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	5.0E-04	1.37E-03	1.29E-03	0.00E+00			0.00E+00	**1.4E-03**
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	6.4E-04	1.37E-03	2.75E-03	0.00E+00			0.00E+00	**2.7E-03**
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	3.8E-05		1.96E-02	0.00E+00			0.00E+00	**2.0E-02**
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0	2.3E-04	4.10E-03	4.91E-03	0.00E+00			0.0E+00	**0.00**
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.7E-04	2.73E-03	9.76E-03	0.00E+00			0.00E+00	**0.01**
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.2E-04	1.37E-03	3.68E-04	0.00E+00				**1.4E-03**
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	9.6E-04	1.37E-03	2.75E-01	0.00E+00			0.00E+00	**0.275**
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.1E-05	6.83E-03	2.22E-03	0.00E+00			negl	**6.8E-03**
1.1.1-Trichloroethane			2.36E-04	2.36E-04						7.68E-04	0.00E+00				**7.7E-04**
1,3-Butadiene															**0.0E+00**
Acetaldehyde															**0.0E+00**
Acrolein															**0.0E+00**
Benzene	2.1E-03		2.14E-04	2.14E-04				9.6E-04		6.96E-04	0.00E+00				**9.6E-04**
Bis(2-ethylhexyl)phthalate							2.2E-03							0.00E+00	**0.0E+00**
Dichlorobenzene	1.2E-03						8.0E-07	5.5E-04						0.00E+00	**5.5E-04**
Ethylbenzene			6.36E-05	6.36E-05						2.07E-04	0.00E+00				**2.1E-04**
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				3.4E-02	1.98E-01	1.07E-01	0.00E+00				**0.198**
Hexane	1.8E+00							0.82							**0.820**
Phenol							2.4E-03							0.00E+00	**0.0E+00**
Toluene	3.4E-03		6.20E-03	6.20E-03				1.5E-03		2.02E-02	0.00E+00				**2.0E-02**
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		3.68E-03	0.00E+00			0.00E+00	**3.7E-03**
Polycyclic Organic Matter		3.30E-03							1.07E-02						**1.1E-02**
Xylene			1.09E-04	1.09E-04						3.55E-04	0.00E+00				**3.5E-04**
							Total HAPs	**0.86**	**0.23**	**0.47**	**0.00**	**0**	**0**	**0.00**	**1.40**

Methodology

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (< 2.5 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity≥ 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer at the source.

Maximum Capacity

Maximum Fuel Input Rate =	104	MMBtu/hr								
Natural Gas Usage =	911	MMCF/yr								
No. 2 Fuel Oil Usage =	6,507,429	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	6,507,429	gal/yr, and	1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0.00	% sulfur						
Propane Usage =	10,066,740	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0.00	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)						
CO2e Fraction	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89
N2O	2.2	0.26	0.19	0.53	0.9	0.9	0.18

Global Warming Potentials (GWP)		
Name	Chemical Formula	Global warming potential
Carbon dioxide	CO_2	1
Methane	CH_4	21
Nitrous oxide	N_2O	310

	Unlimited/Uncontrolled Potential to Emit (tons/yr)						
CO2e Fraction	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)
CO2	54,736.12	73,213.16	78588.47	0.00	62917.13	0.00	0.00
CH4	1.14	2.97	3.14	0.00	3.03	0.00	0.00
N2O	1.00	0.85	0.63	0.00	4.53	0.00	0.00
Total	54,738.26	73,216.98	78,592.24	0.00	62,924.69	0.00	0.00
CO2e Equivalent Emissions (tons/yr)	55,070.64	73,537.78	78,849.25	0.00	64,385.05	0.00	0.00

CO2e for Worst Case Fuel* (tons/yr)
78,849.25

Methodology
Fuel Usage from TSD Appendix A.1, page 1 of 14.
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0915 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.102 MMBtu]
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Propane: Emission Factor for CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, has been converted from kg/mmBtu to lb/kgal. Emission Factors for CO2 and N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1

Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1

Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

Abbreviations
PTE = Potential to Emit
CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrogen Dioxide

Emission Factor (EF) Conversions:
Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Appendix A.1: Unlimited Emissions Calculations
Dryer/Mixer - Process Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	400	ton/hr
Maximum Annual Asphalt Production =	3,504,000	ton/yr

	Uncontrolled Emission Factors (lb/ton)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Drum-Mix Plant (dryer/mixer)			Drum-Mix Plant (dryer/mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	**Worse Case PTE**
PM*	28	28	28	49,056.00	49,056.00	49,056.00	**49,056.00**
PM10*	6.5	6.5	6.5	11,388.00	11,388.00	11,388.00	**11,388.00**
PM2.5*	1.5	1.5	1.5	2,628.00	2,628.00	2,628.00	**2,628.00**
SO2**	0.0034	0.011	0.058	5.96	19.27	101.62	**101.62**
NOx**	0.026	0.055	0.055	45.55	96.36	96.36	**96.36**
VOC**	0.032	0.032	0.032	56.06	56.06	56.06	**56.06**
CO***	0.13	0.13	0.13	227.76	227.76	227.76	**227.76**
Hazardous Air Pollutant							
HCl			2.10E-04			3.68E-01	**0.37**
Antimony	1.80E-07	1.80E-07	1.80E-07	3.15E-04	3.15E-04	3.15E-04	**3.15E-04**
Arsenic	5.60E-07	5.60E-07	5.60E-07	9.81E-04	9.81E-04	9.81E-04	**9.81E-04**
Beryllium	negl	negl	negl	negl	negl	negl	**0**
Cadmium	4.10E-07	4.10E-07	4.10E-07	7.18E-04	7.18E-04	7.18E-04	**7.18E-04**
Chromium	5.50E-06	5.50E-06	5.50E-06	9.64E-03	9.64E-03	9.64E-03	**9.64E-03**
Cobalt	2.60E-08	2.60E-08	2.60E-08	4.56E-05	4.56E-05	4.56E-05	**4.56E-05**
Lead	6.20E-07	1.50E-05	1.50E-05	1.09E-03	2.63E-02	2.63E-02	**2.6E-02**
Manganese	7.70E-06	7.70E-06	7.70E-06	1.35E-02	1.35E-02	1.35E-02	**1.3E-02**
Mercury	2.40E-07	2.60E-06	2.60E-06	4.20E-04	4.56E-03	4.56E-03	**4.56E-03**
Nickel	6.30E-05	6.30E-05	6.30E-05	0.11	0.11	0.11	**0.11**
Selenium	3.50E-07	3.50E-07	3.50E-07	6.13E-04	6.13E-04	6.13E-04	**6.13E-04**
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0.07	0.07	0.07	**0.07**
Acetaldehyde			1.30E-03			2.28	**2.28**
Acrolein			2.60E-05			4.56E-02	**0.05**
Benzene	3.90E-04	3.90E-04	3.90E-04	0.68	0.68	0.68	**0.68**
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.42	0.42	0.42	**0.42**
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	5.43	5.43	5.43	**5.43**
Hexane	9.20E-04	9.20E-04	9.20E-04	1.61	1.61	1.61	**1.61**
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.08	0.08	0.08	**0.08**
MEK			2.00E-05			0.04	**0.04**
Propionaldehyde			1.30E-04			0.23	**0.23**
Quinone			1.60E-04			0.28	**0.28**
Toluene	1.50E-04	2.90E-03	2.90E-03	0.26	5.08	5.08	**5.08**
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.33	1.54	1.54	**1.54**
Xylene	2.00E-04	2.00E-04	2.00E-04	0.35	0.35	0.35	**0.35**
						Total HAPs	**18.68**
						Worst Single HAP	**5.43** **(formaldehyde)**

Methodology
Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-7, 11.1-8, 11.1-10, and 11.1-12
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

* PM, PM10, and PM2.5 AP-42 emission factors based on drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. According to AP-42 fuel type does not significantly effect PM, PM10, and PM2.5 emissions.

** SO2, NOx, and VOC AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.

*** CO AP-42 emission factor determined by combining data from drum mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations

PM = Particulate Matter	SO2 = Sulfur Dioxide	CO = Carbon Monoxide	PAH = Polyaromatic Hydrocarbon
PM10 = Particulate Matter (<10 um)	NOx = Nitrous Oxides	HAP = Hazardous Air Pollutant	
PM2.5 = Particulate Matter (< 2.5 um)	VOC - Volatile Organic Compounds	HCl = Hydrogen Chloride	

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from the
Drum-Mix Plant (Dryer/Mixer) Process Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	400	ton/hr
Maximum Annual Asphalt Production =	3,504,000	ton/yr

	Emission Factor (lb/ton) Drum-Mix Plant (dryer/mixer)				Unlimited/Uncontrolled Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Global Warming Potentials (GWP)	Natural Gas	No. 2 Fuel Oil	Waste Oil	**CO2e for Worst Case Fuel (tons/yr)**
CO2	33	33	33	1	57,816.00	57,816.00	57,816.00	**58,257.50**
CH4	0.0120	0.0120	0.0120	21	21.02	21.02	21.02	
N2O				310	0	0	0	
				Total	57,837.02	57,837.02	57,837.02	
				CO2e Equivalent Emissions (tons/yr)	58,257.50	58,257.50	58,257.50	

Methodology

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-7 and 11.1-8

There are no emission factors for N20 available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipated from this process.

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CO2 = Carbon Dioxide CH4 = Methane N2O = Nitrogen Dioxide PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Dryer/Mixer Slag Processing

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited emissions from the processing of slag in the aggregate drying/mixing

Maximum Annual Blast Furnace Slag Usage =	0	ton/yr	0	% sulfur
Maximum Annual Steel Slag Usage =	1,471,680	ton/yr	0.66	% sulfur

Type of Slag	SO2 Emission Factor (lb/ton)	Unlimited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag*	0.00	0.0
Steel Slag**	0.0014	1.03

Methodology
The maximum annual slag usage was provided by the source.

* Testing results for blast furnace slag, obtained January 9, 2009 from similar operations at Rieth-Riley Construction Co., Inc. facility located in Valparaiso, IN (permit #127-27075-05241), produced an Emission Factor of 0.54 lb/ton from blast furnace slag containing 1.10% sulfur content. The source has requested a safety factor of 0.20 lb/ton be added to the tested value for use at this location to allow for a sulfur content up to 1.5%.

** Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content.
Unlimited Potential to Emit SO2 from Slag (tons/yr) = [(Maximum Annual Slag Usage (ton/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
Abbreviations
SO2 = Sulfur Dioxide

Appendix A.1: Unlimited Emissions Calculations
Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Location: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate =	2.00	MMBtu/hr	*(2 @ 1.0 MMBtu/hr each)*	
Natural Gas Usage =	18	MMCF/yr		
No. 2 Fuel Oil Usage =	125,143	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	0.017	0.125	**0.13**
PM10/PM2.5	7.6	3.3	0.067	0.206	**0.21**
SO2	0.6	71.0	0.005	4.443	**4.44**
NOx	100	20.0	0.876	1.251	**1.25**
VOC	5.5	0.20	0.048	0.013	**0.05**
CO	84	5.0	0.736	0.313	**0.74**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.8E-06	3.50E-05	**3.5E-05**
Beryllium	1.2E-05	4.2E-04	1.1E-07	2.63E-05	**2.6E-05**
Cadmium	1.1E-03	4.2E-04	9.6E-06	2.63E-05	**2.6E-05**
Chromium	1.4E-03	4.2E-04	1.2E-05	2.63E-05	**2.6E-05**
Cobalt	8.4E-05		7.4E-07		**7.4E-07**
Lead	5.0E-04	1.3E-03	4.4E-06	7.88E-05	**7.9E-05**
Manganese	3.8E-04	8.4E-04	3.3E-06	5.26E-05	**5.3E-05**
Mercury	2.6E-04	4.2E-04	2.3E-06	2.63E-05	**2.6E-05**
Nickel	2.1E-03	4.2E-04	1.8E-05	2.63E-05	**2.6E-05**
Selenium	2.4E-05	2.1E-03	2.1E-07	1.31E-04	**1.3E-04**
Benzene	2.1E-03		1.8E-05		**1.8E-05**
Dichlorobenzene	1.2E-03		1.1E-05		**1.1E-05**
Ethylbenzene					**0**
Formaldehyde	7.5E-02	6.10E-02	6.6E-04	3.82E-03	**3.8E-03**
Hexane	1.8E+00		1.6E-02		**1.6E-02**
Phenol					**0**
Toluene	3.4E-03		3.0E-05		**3.0E-05**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		2.06E-04	**2.1E-04**
		Total HAPs =	**1.7E-02**	**4.5E-03**	**0.020**
		Worst Single HAP =	**1.6E-02 (Hexane)**	**3.8E-03 (Formaldehyde)**	**1.6E-02 (Hexane)**

Methodology
Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate =	2.00	MMBtu/hr *(2 @ 1.0 MMBtu/hr each)*		
Natural Gas Usage =	18	MMCF/yr		
No. 2 Fuel Oil Usage =	125,143	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)
CO2	120,161.84	22,501.41	1	1,052.62	1,407.95
CH4	2.49	0.91	21	0.02	0.06
N2O	2.2	0.26	310	0.02	0.02
				1,052.66	1,408.02
CO2e Equivalent Emissions (tons/yr)				1,059.05	1,414.19

Worse Case CO2e Emissions (tons/yr)
1,414.19

Methodology

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Emission Factor (EF) Conversions
Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrogen Dioxide
PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Hot Oil Heating System - Process Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater =	2.00	MMBtu/hr	*(2 @ 1.0 MMBtu/hr each)*
Natural Gas Usage =	18	MMCF/yr, and	
No. 2 Fuel Oil Usage =	125,143	gal/yr	

	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
Criteria Pollutant	Natural Gas (lb/ft3)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	**Worse Case PTE**
VOC	2.60E-08	2.65E-05	2.28E-04	0.002	**0.002**
CO	8.90E-06	0.0012	0.078	0.075	**0.078**
Greenhouse Gas as CO2e*					
CO2	0.20	28.00	1,752.00	1,752.00	**1,752.00**
Hazardous Air Pollutant					
Formaldehyde	2.60E-08	3.50E-06	2.28E-04	2.19E-04	**2.28E-04**
Acenaphthene		5.30E-07		3.32E-05	**3.32E-05**
Acenaphthylene		2.00E-07		1.25E-05	**1.25E-05**
Anthracene		1.80E-07		1.13E-05	**1.13E-05**
Benzo(b)fluoranthene		1.00E-07		6.26E-06	**6.26E-06**
Fluoranthene		4.40E-08		2.75E-06	**2.75E-06**
Fluorene		3.20E-08		2.00E-06	**2.00E-06**
Naphthalene		1.70E-05		1.06E-03	**1.06E-03**
Phenanthrene		4.90E-06		3.07E-04	**3.07E-04**
Pyrene		3.20E-08		2.00E-06	**2.00E-06**
				Total HAPs	**1.67E-03**
				Worst Single HAP	**1.06E-03 (Naphthalene)**

Methodology
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))*(Emission Factor (lb/CF))*(1000000 CF/MMCF)*(ton/2000 lbs)
No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))*(Emission Factor (lb/gal))*(ton/2000 lbs)
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/yr) x CO2 GWP (1)
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

*Note: There are no emission factors for CH4 and N20 available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

Abbreviations
CO = Carbon Monoxide VOC = Volatile Organic Compound CO2 = Carbon Dioxide

Appendix A.1: Unlimited Emissions Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
RAP Crusher

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Output Horsepower Rating (hp)	0.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	0
Maximum Diesel Fuel Usage (gal/yr)	0

Note: The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.

	Pollutant						
	PM[2]	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal[1]	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Emission Factor in lb/kgal[4]	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	**0.00E+00**
Potential Emission of Worst Case HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[6]	N2O[6]
Emission Factor in lb/hp-hr	1.15	NA	NA
Emission Factor in kg/MMBtu	NA	0.003	0.0006
Emission Factor in lb/kgal	22,512.07	0.91	0.18
Potential Emission in tons/yr	0.00	0.000	0.000

[5]The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[6]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**0.00**
CO2e Total in tons/yr	**0.00**

Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.1: Unlimited Emissions Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Output Horsepower Rating (hp)	0.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	0
Maximum Diesel Fuel Usage (gal/yr)	0

Sulfur Content (S) of Fuel (% by weight) 0.00

	Pollutant						
	PM	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			0.00E+00 *(.00809S)*	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal[1]	13.70	7.85	7.85	0.00	469.82	13.80	107.67
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[2]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal[4]	1.06E-01	3.85E-02	2.64E-02	1.08E-02	3.45E-03	1.08E-03	2.91E-02
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	**0.00E+00**
Potential Emission of Worst Case HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[5,6]	N2O[7]
Emission Factor in lb/hp-hr	1.16	6.35E-05	NA
Emission Factor in kg/MMBtu	NA	NA	0.0006
Emission Factor in lb/kgal	22,707.83	1.24	0.18
Potential Emission in tons/yr	0.00	0.00	0.00

[5] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]According to AP-42, Table 3.4-1, TOC (as CH4) is 9% methane by weight. As a result, the lb/hp-hr emission factor for TOC (as CH4) in AP-42 has been multiplied by 9% to determine the portion that is emitted as methane.

[7]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[7]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**0.00**
CO2e Total in tons/yr	**0.00**

Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.

N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled fugitive emissions from hot asphalt mix load-out, silo filling, and on-site yard for a drum mix hot mix asphalt plant

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	3,504,000	tons/yr

	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Total**
Total PM*	5.2E-04	5.9E-04	NA	0.91	1.03	NA	**1.94**
Organic PM	3.4E-04	2.5E-04	NA	0.60	0.445	NA	**1.04**
TOC	0.004	0.012	0.001	7.29	21.35	1.927	**30.6**
CO	0.001	0.001	3.5E-04	2.36	2.067	0.617	**5.05**

NA = Not Applicable (no AP-42 Emission Factor)

PM/HAPs	**0.042**	**0.050**	**0**	**0.093**
VOC/HAPs	**0.108**	**0.272**	**0.028**	**0.408**
non-VOC/HAPs	**5.6E-04**	**5.8E-05**	**1.5E-04**	**7.7E-04**
non-VOC/non-HAPs	**0.53**	**0.30**	**0.14**	**0.97**

Total VOCs	**6.85**	**21.35**	**1.8**	**30.0**
Total HAPs	**0.15**	**0.32**	**0.029**	**0.50**
			Worst Single HAP	**0.155 (formaldehyde)**

Methodology
The asphalt temperature and volatility factor were provided by the source.
Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::
Total PM/PM10/PM2.5 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)
Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):
PM/PM10 Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)
On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32
*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Organic Particulate-Based Compounds (Table 11.1-15)

					Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**Load-out and Onsite Yard (% by weight of Total Organic PM)**	**Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)**	**Load-out**	**Silo Filling**	**Onsite Yard**	**Total**
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	1.6E-03	2.1E-03	NA	3.6E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	1.7E-04	6.2E-05	NA	2.3E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	4.2E-04	5.8E-04	NA	1.0E-03
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.1E-04	2.5E-04	NA	3.6E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	4.5E-05	0	NA	4.5E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	1.3E-05	0	NA	1.3E-05
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.1E-05	0	NA	1.1E-05
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.4E-05	0	NA	1.4E-05
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	4.7E-05	4.2E-05	NA	8.9E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	6.2E-04	9.3E-04	NA	1.5E-03
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	2.2E-06	0	NA	2.2E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	3.0E-04		NA	3.0E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	4.6E-03	4.5E-03	NA	9.1E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	2.8E-06	0	NA	2.8E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	1.4E-02	2.3E-02	NA	0.038
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	7.5E-03	8.1E-03	NA	1.6E-02
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	1.3E-04	1.3E-04	NA	2.6E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	4.8E-03	8.0E-03	NA	1.3E-02
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	9.0E-04	2.0E-03	NA	2.9E-03
Total PAH HAPs							**0.035**	**0.050**	**NA**	**0.086**
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	7.0E-03	0	0	7.0E-03

NA = Not Applicable (no AP-42 Emission Factor)

Methodology
Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [Organic PM (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations
PM = Particulate Matter
HAP = Hazardous Air Pollutant
POM = Polycyclic Organic Matter

Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

Organic Volatile-Based Compounds (Table 11.1-16)

					Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**Load-out and Onsite Yard (% by weight of TOC)**	**Silo Filling and Asphalt Storage Tank (% by weight of TOC)**	**Load-out**	**Silo Filling**	**Onsite Yard**	**Total**
VOC		VOC	---	TOC	94%	100%	**6.85**	**21.35**	**1.81**	**30.01**
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	4.7E-01	5.6E-02	1.3E-01	0.654
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	3.4E-03	1.2E-02	8.9E-04	0.016
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	5.2E-02	2.3E-01	1.4E-02	0.300
Total non-VOC/non-HAPS					7.30%	1.40%	**0.532**	**0.299**	**0.141**	**0.97**
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	3.8E-03	6.8E-03	1.0E-03	1.2E-02
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	7.0E-04	1.0E-03	1.9E-04	1.9E-03
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	3.6E-03	8.3E-03	9.4E-04	1.3E-02
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	9.5E-04	3.4E-03	2.5E-04	4.6E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	1.5E-05	8.5E-04	4.0E-06	8.7E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.1E-03	4.9E-03	2.9E-04	6.3E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	8.0E-03	0	2.1E-03	1.0E-02
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	2.0E-02	8.1E-03	5.4E-03	0.034
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	6.4E-03	1.5E-01	1.7E-03	0.155
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.1E-02	2.1E-02	2.9E-03	0.035
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	1.3E-04	6.6E-05	3.5E-05	2.3E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	5.8E-05	0	5.8E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	5.3E-04	1.2E-03	1.4E-04	1.8E-03
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	5.6E-04	0	1.5E-04	7.1E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	1.5E-02	1.3E-02	4.0E-03	0.033
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	9.5E-05	0	2.5E-05	1.2E-04
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	3.0E-02	4.3E-02	7.9E-03	0.080
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	5.8E-03	1.2E-02	1.5E-03	2.0E-02
Total volatile organic HAPs					1.50%	1.30%	**0.109**	**0.278**	**0.029**	**0.416**

Methodology
Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations
TOC = Total Organic Compounds
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
MTBE = Methyl tert butyl ether

Appendix A.1: Unlimited Emissions Calculations
Material Storage Piles

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	1.50	0.824	0.288
Limestone	1.6	1.85	1.50	0.507	0.177
RAP	0.5	0.58	1.50	0.158	0.055
Gravel	1.6	1.85	1.50	0.507	0.177
Shingles	0.5	0.58	1.50	0.158	0.055
Slag	3.8	4.40	2.00	1.605	0.562
			Totals	**3.76**	**1.32**

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
RAP = Recycled Asphalt Pavement

Appendix A.1: Unlimited Emissions Calculations
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Batch or Continuous Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where: Ef =	Emission factor (lb/ton)	
k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
Ef (PM) =	2.27E-03	lb PM/ton of material handled
Ef (PM10) =	1.07E-03	lb PM10/ton of material handled
Ef (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

Maximum Annual Asphalt Production =	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	3,328,800	tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)	Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	3.77	1.78	0.27
Front-end loader dumping of materials into feeder bins	3.77	1.78	0.27
Conveyor dropping material into dryer/mixer or batch towe	3.77	1.78	0.27
Total (tons/yr)	**11.32**	**5.35**	**0.81**

Methodology

The percent asphalt cement/binder provided by the source.
Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Unlimited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additivies
*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 11.19.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	8.99	3.99
Screening	0.025	0.0087	41.61	14.48
Conveying	0.003	0.0011	4.99	1.83
Unlimited Potential to Emit (tons/yr) =			**55.59**	**20.31**

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Unlimited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).
**Assumes PM10 = PM2.5

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate matter (< 2.5 um)
PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Unpaved Roads

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Maximum Annual Asphalt Production =	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	3,328,800	tons/yr
Maximum Asphalt Cement/Binder Throughput =	175,200	tons/yr
Maximum No. 2 Fuel Oil Usage =	6,507,429	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	1.5E+05	5.9E+06	300	0.057	8443.6
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	1.5E+05	2.5E+06	300	0.057	8443.6
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	4.9E+03	2.3E+05	300	0.057	276.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	4.9E+03	5.8E+04	300	0.057	276.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	6.9E+02	3.0E+04	300	0.057	39.1
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	6.9E+02	8.2E+03	300	0.057	39.1
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	7.9E+05	1.5E+07	300	0.057	45032.5
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	7.9E+05	1.2E+07	300	0.057	45032.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	1.5E+05	6.0E+06	300	0.057	8295.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	1.5E+05	2.5E+06	300	0.057	8295.5
	Total				**2.2E+06**	**4.4E+07**			**1.2E+05**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Roa
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/36
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	6.09	1.55	0.16	lb/mile
Mitigated Emission Factor, Eext =	4.01	1.02	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control pla

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Ful	Dump truck (16 CY)	25.73	6.56	0.66	16.92	4.31	0.43	8.46	2.16	0.22
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	25.73	6.56	0.66	16.92	4.31	0.43	8.46	2.16	0.22
Asphalt Cement/Binder Truck Enter Ful	Tanker truck (6000 gal)	0.843	0.215	0.02	0.554	0.141	0.01	0.277	0.071	0.01
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.843	0.215	0.02	0.554	0.141	0.01	0.277	0.071	0.01
Fuel Oil Truck Enter Ful	Tanker truck (6000 gal)	0.119	0.030	0.00	0.078	0.020	0.00	0.039	0.010	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.119	0.030	0.00	0.078	0.020	0.00	0.039	0.010	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	137.23	34.98	3.50	90.23	23.00	2.30	45.12	11.50	1.15
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	137.23	34.98	3.50	90.23	23.00	2.30	45.12	11.50	1.15
Asphalt Concrete Truck Leave Ful	Dump truck (16 CY)	25.28	6.44	0.64	16.62	4.24	0.42	8.31	2.12	0.21
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	25.28	6.44	0.64	16.62	4.24	0.42	8.31	2.12	0.21
	Totals	**378.41**	**96.44**	**9.64**	**248.82**	**63.41**	**6.34**	**124.41**	**31.71**	**3.17**

Methodology
Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particulate Matter (<2.5 um) PTE = Potential to Emit

Appendix A: Unlimited Emissions Calculations
Paved Roads

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Maximum Annual Asphalt Production =	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	3,328,800	tons/yr
Maximum Asphalt Cement/Binder Throughput =	175,200	tons/yr
Maximum No. 2 Fuel Oil Usage =	6,507,429	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	1.5E+05	5.9E+06	300	0.057	8,443.6
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	1.5E+05	2.5E+06	300	0.057	8,443.6
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	4.9E+03	2.3E+05	300	0.057	276.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	4.9E+03	5.8E+04	300	0.057	276.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	6.9E+02	3.0E+04	300	0.057	39.1
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	6.9E+02	8.2E+03	300	0.057	39.1
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	7.9E+05	1.5E+07	300	0.057	45,032.5
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	7.9E+05	1.2E+07	300	0.057	45,032.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	1.5E+05	6.0E+06	300	0.057	8,295.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	1.5E+05	2.5E+06	300	0.057	8,295.5
	Total				**2.2E+06**	**4.4E+07**			**1.2E+05**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer month

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.15	0.03	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.14	0.03	0.01	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control pla

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Ful	Dump truck (16 CY)	0.63	0.13	0.03	0.57	0.11	0.03	0.29	0.06	0.01
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.63	0.13	0.03	0.57	0.11	0.03	0.29	0.06	0.01
Asphalt Cement/Binder Truck Enter Ful	Tanker truck (6000 gal)	0.021	0.004	1.0E-03	0.019	0.004	9.2E-04	0.009	1.9E-03	4.6E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.021	0.004	1.0E-03	0.019	0.004	9.2E-04	0.009	1.9E-03	4.6E-04
Fuel Oil Truck Enter Ful	Tanker truck (6000 gal)	2.9E-03	5.8E-04	1.4E-04	2.7E-03	5.3E-04	1.3E-04	1.3E-03	2.7E-04	6.5E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	2.9E-03	5.8E-04	1.4E-04	2.7E-03	5.3E-04	1.3E-04	1.3E-03	2.7E-04	6.5E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	3.35	0.67	0.16	3.06	0.61	0.15	1.53	0.31	0.08
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	3.35	0.67	0.16	3.06	0.61	0.15	1.53	0.31	0.08
Asphalt Concrete Truck Leave Ful	Dump truck (16 CY)	0.62	0.12	0.03	0.56	0.11	0.03	0.28	0.06	0.01
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.62	0.12	0.03	0.56	0.11	0.03	0.28	0.06	0.01
	Totals	**9.23**	**1.85**	**0.45**	**8.44**	**1.69**	**0.41**	**4.22**	**0.84**	**0.21**

Methodology
Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight
Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particulate Matter (<2.5 um) PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Cold Mix Asphalt Production and Stockpiles

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Maximum Annual Asphalt Production =	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Asphalt Cement/Binder Throughput =	175,200	tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder*	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Usage (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	44,325.6	42,109.3
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	50,107.2	35,075.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	35,040.0	8,760.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	26,280.0	12,193.9
Other asphalt with solvent binder	25.9%	2.5%	45,376.8	1,134.4
			Worst Case PTE of VOC =	**42,109.3**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
PTE of Total HAPs (tons/yr) =	**10,983.67**	
PTE of Single HAP (tons/yr) =	**3,789.84**	**Xylenes**

Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents*

		Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
Volatile Organic HAP	CAS#	Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	1110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		**26.08%**	**0.33%**	**1.29%**	**0.68%**	**0.19%**
Worst Single HAP		**9.00% Xylenes**	**0.31% Naphthalene**	**0.50% Xylenes**	**0.23% Xylenes**	**0.07% Chrysene**

Methodology
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Throughput (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]
PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Usage (tons/yr)]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Gasoline Fuel Transfer and Dispensing Operation

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

Gasoline Throughput =	0	gallons/day
=	0.0	kgal/yr

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
Total		**0.00**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**0.00**	
Limited PTE of Single HAP (tons/yr) =	**0.00**	**Xylenes**

Methodology
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Entire Source - Drum Mix

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Asphalt Plant Limitations - Drum Mix

Maximum Hourly Asphalt Production =	400	ton/hr								
Annual Asphalt Production Limitation =	1,000,000	ton/yr								
Blast Furnace Slag Usage Limitation =	0	ton/yr	0	% sulfur						
Steel Slag Usage Limitation =	150,000		0.66	% sulfur						
Maximum Dryer Fuel Input Rate =	104	MMBtu/hr								
Natural Gas Limitation =	911	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,660,632	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	787,104	gal/yr, and	1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	10,066,740	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	0	gal/yr, and	0	% sulfur	0	% ash	0	% chlorine,	0	% lead
Diesel Fuel Limitation - Generator < 600 HP =	0	gal/yr,and								
Diesel Fuel Limitation - Generator > 600 HP =	0	gal/yr	0.00	% sulfur						

PM Dryer/Mixer Limitation =	0.201	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.115	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.175	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production
Blast Furnace Slag SO2 Dryer/Mixer Limitation =	0	lb/ton of slag processed
Steel Slag SO2 Dryer/Mixer Limitation =	0.0014	lb/ton of slag processed
Cold Mix Asphalt VOC Limitation =	58.89	tons/yr
HCl Limitation =	0	lb/kgal

Limited/Controlled Emissions

	Limited/Controlled Potential Emissions (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**CO_2e**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions											
Dryer Fuel Combustion (worst case)	2.75	4.39	4.39	94.45	86.55	5.03	38.26	64,385.05	0.96	0.82	(hexane)
Dryer/Mixer (Process)	100.45	57.74	87.71	5.50	27.50	16.00	65.00	16,626.00	4.41	1.55	(formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0.11	0	0	0	0	0	0	
Hot Oil Heater Fuel Combustion/Process (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,752.00	0.02	0.016	(hexane)
Diesel-Fired Generator < 600 HP * (crusher)	0	0	0	0	0	0	0	0	0	0	
Diesel-Fired Generator > 600 HP	0	0	0	0	0	0	0	0	0	0	
Worst Case Emissions**	**100.57**	**57.95**	**87.92**	**99.00**	**87.80**	**16.05**	**65.74**	**66,137.05**	**4.43**	**1.55**	**(formaldehyde)**
Fugitive Emissions											
Asphalt Load-Out, Silo Filling, On-Site Yard	0.55	0.55	0.55	0	0	8.57	1.44	0	0.14	0.04	(formaldehyde)
Material Storage Piles	3.76	1.32	1.32	0	0	0	0	0	0	0	
Material Processing and Handling	3.23	1.53	0.23	0	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	15.87	5.80	5.80	0	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	125.02	31.86	3.19	0	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	58.89	0	0	15.36	5.30	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	0	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	negl	
Total Fugitive Emissions	**148.43**	**41.05**	**11.08**	**0**	**0**	**67.45**	**1.44**	**0.00**	**15.50**	**5.30**	(xylenes)
Totals Limited/Controlled Emissions	**249.00**	**99.00**	**99.00**	**99.00**	**87.80**	**83.50**	**67.18**	**66,137.05**	**19.93**	**5.30**	(xylenes)

negl = negligible
Worst Case Fuel Combustion is based on the fuel with the highest emissions for each specific pollutant.
Fuel component percentages provided by the source.
* The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.
*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP

Appendix A.2: Limited Emissions Summary
Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the limited emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer and all other fuel combustion sources at the source.

Fuel Limitations

Maximum Fuel Input Rate =	104	MMBtu/hr								
Natural Gas Limitation =	911	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,660,632	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	787,104	gal/yr, and	1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0.00	% sulfur						
Propane Limitation =	10,066,740	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0.00	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead

Limited Emissions

	Emission Factor (units)							Limited Potential to Emit (tons/yr)							
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2	7	3.22	0.5	0.6	0	0.87	2.66	2.75	0.00	2.52	0.00	0.00	**2.75**
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	0	3.46	4.39	3.27	0.00	2.52	0.00	0.00	**4.39**
SO2	0.6	71.0	240.0	0.0	0.020	0.000	0.0	0.27	94.45	94.45	0.00	0.10	0.00	0.00	**94.45**
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	86.55	31.93	18.50	0.00	65.43	0.00	0.00	**86.55**
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.51	0.27	0.08	0.00	5.03	0.00	0.00	**5.03**
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	38.26	6.65	1.97	0.00	37.75	0.00	0.00	**38.26**
Hazardous Air Pollutant															
HCl							0.0							0.00	**0.00**
Antimony			5.25E-03	5.25E-03			negl			2.07E-03	0.00E+00			negl	**2.1E-03**
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	9.1E-05	7.45E-04	5.19E-04	0.00E+00			0.00E+00	**7.4E-04**
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	5.5E-06	5.59E-04	1.09E-05	0.00E+00			negl	**5.6E-04**
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	5.0E-04	5.59E-04	1.57E-04	0.00E+00			0.00E+00	**5.6E-04**
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	6.4E-04	5.59E-04	3.33E-04	0.00E+00			0.00E+00	**6.4E-04**
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	3.8E-05		2.37E-03	0.00E+00			0.00E+00	**2.4E-03**
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0	2.3E-04	1.68E-03	5.94E-04	0.00E+00			0.0E+00	**0.00**
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.7E-04	1.12E-03	1.18E-03	0.00E+00			0.00E+00	**0.00**
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.2E-04	5.59E-04	4.45E-05	0.00E+00				**5.6E-04**
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	9.6E-04	5.59E-04	3.33E-02	0.00E+00			0.00E+00	**0.033**
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.1E-05	2.79E-03	2.69E-04	0.00E+00			negl	**2.8E-03**
1.1.1-Trichloroethane			2.36E-04	2.36E-04						9.29E-05	0.00E+00				**9.3E-05**
1,3-Butadiene															**0.0E+00**
Acetaldehyde															**0.0E+00**
Acrolein															**0.0E+00**
Benzene	2.1E-03		2.14E-04	2.14E-04				9.6E-04		8.42E-05	0.00E+00				**9.6E-04**
Bis(2-ethylhexyl)phthalate							2.2E-03							0.00E+00	**0.0E+00**
Dichlorobenzene	1.2E-03						8.0E-07	5.5E-04						0.00E+00	**5.5E-04**
Ethylbenzene			6.36E-05	6.36E-05						2.50E-05	0.00E+00				**2.5E-05**
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				3.4E-02	8.11E-02	1.30E-02	0.00E+00				**0.081**
Hexane	1.8E+00							0.82							**0.820**
Phenol							2.4E-03							0.00E+00	**0.0E+00**
Toluene	3.4E-03		6.20E-03	6.20E-03				1.5E-03		2.44E-03	0.00E+00				**2.4E-03**
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		4.45E-04	0.00E+00			0.00E+00	**4.4E-04**
Polycyclic Organic Matter		3.30E-03							4.39E-03						**4.4E-03**
Xylene			1.09E-04	1.09E-04						4.29E-05	0.00E+00				**4.3E-05**
							Total HAPs	**0.86**	**0.09**	**0.06**	**0.00**	**0**	**0**	**0.00**	**0.96**

Methodology

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (< 2.5 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity ≥ 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the limited emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer and all other fuel combustion sources at the source.

Fuel Limitations

Maximum Fuel Input Rate =	104	MMBtu/hr								
Natural Gas Limitation =	911	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,660,632	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	787,104	gal/yr, and	1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0.00	% sulfur						
Propane Limitation =	10,066,740	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0.00	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead

Limited Emissions

	Emission Factor (units)							Global Warming Potentials (GWP)		
CO2e Fraction	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Name	Chemical Formula	Global warming potential
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO_2	1
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH_4	21
N2O	2.20	0.26	0.19	0.53	0.90	0.90	0.18	Nitrous oxide	N_2O	310

	Limited Potential to Emit (tons/yr)							
CO2e Fraction	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	**CO2e for Worst Case Fuel* (tons/yr)**
CO2	54,736.12	29,933.98	9,505.64	0.00	62,917.13	0.00	0.00	**64,385.05**
CH4	1.14	1.21	0.38	0.00	3.03	0.00	0.00	
N2O	1.00	0.35	0.08	0.00	4.53	0.00	0.00	
Total	54,738.26	29,935.54	9,506.09	0.00	62,924.69	0.00	0.00	
CO2e Equivalent Emissions (tons/yr)	55,070.64	30,066.71	9,537.18	0.00	64,385.05	0.00	0.00	

Methodology
Fuel Limitations from TSD Appendix A.2, page 1 of 15.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)
Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter
No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8
Propane and Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1
Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.
Emission Factor (EF) Conversions
Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]
Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (21) + N2O Potential Emission of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations
CH4 = Methane CO2 = Carbon Dioxide N2O = Nitrogen Dioxide PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Dryer/Mixer - Process Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the limited emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	400	ton/hr
Annual Asphalt Production Limitation =	1,000,000	ton/yr
PM Dryer/Mixer Limitation =	0.201	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.115	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.175	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production

	Emission Factor or Limitation (lb/ton) Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			Limited/Controlled Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	**Worse Case PTE**
PM*	0.201	0.201	0.201	100.4	100.4	0	**100.4**
PM10*	0.115	0.115	0.115	57.7	57.7	0	**57.7**
PM2.5*	0.175	0.175	0.175	87.7	87.7	0	**87.7**
SO2**	0.003	0.011	0.058	1.7	5.5	0	**5.5**
NOx**	0.026	0.055	0.055	13.0	27.5	0	**27.5**
VOC**	0.032	0.032	0.032	16.0	16.0	0	**16.0**
CO***	0.130	0.130	0.130	65.0	65.0	0	**65.0**
Hazardous Air Pollutant							
HCl			2.10E-04			0	**0**
Antimony	1.80E-07	1.80E-07	1.80E-07	9.00E-05	9.00E-05	0	**9.00E-05**
Arsenic	5.60E-07	5.60E-07	5.60E-07	2.80E-04	2.80E-04	0	**2.80E-04**
Beryllium	negl	negl	negl	negl	negl	0	**0**
Cadmium	4.10E-07	4.10E-07	4.10E-07	2.05E-04	2.05E-04	0	**2.05E-04**
Chromium	5.50E-06	5.50E-06	5.50E-06	2.75E-03	2.75E-03	0	**2.75E-03**
Cobalt	2.60E-08	2.60E-08	2.60E-08	1.30E-05	1.30E-05	0	**1.30E-05**
Lead	6.20E-07	1.50E-05	1.50E-05	3.10E-04	7.50E-03	0	**7.50E-03**
Manganese	7.70E-06	7.70E-06	7.70E-06	3.85E-03	3.85E-03	0	**3.85E-03**
Mercury	2.40E-07	2.60E-06	2.60E-06	1.20E-04	1.30E-03	0	**1.30E-03**
Nickel	6.30E-05	6.30E-05	6.30E-05	3.15E-02	3.15E-02	0	**3.15E-02**
Selenium	3.50E-07	3.50E-07	3.50E-07	1.75E-04	1.75E-04	0	**1.75E-04**
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	2.00E-02	2.00E-02	0	**2.00E-02**
Acetaldehyde			1.30E-03			0	**0**
Acrolein			2.60E-05			0	**0**
Benzene	3.90E-04	3.90E-04	3.90E-04	0.20	0.20	0	**0.20**
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.12	0.12	0	**0.12**
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	1.55	1.55	0	**1.55**
Hexane	9.20E-04	9.20E-04	9.20E-04	0.46	0.46	0	**0.46**
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.02	0.02	0	**0.02**
MEK			2.00E-05			0	**0**
Propionaldehyde			1.30E-04			0	**0**
Quinone			1.60E-04			0	**0**
Toluene	1.50E-04	2.90E-03	2.90E-03	0.08	1.45	0	**1.45**
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.10	0.44	0	**0.44**
Xylene	2.00E-04	2.00E-04	2.00E-04	0.10	0.10	0	**0.10**
						Total HAPs	**4.41**
						Worst Single HAP	**1.55 (formaldehyde)**

Methodology
Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-4, 11.1-7, 11.1-8, 11.1-10, and 11.1-12
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

* PM, PM10, and PM2.5 AP-42 emission factors based on drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. According to AP-42 fuel type does not significantly effect PM, PM10, and PM2.5 emissions.
** SO2, NOx, and VOC AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.
*** CO AP-42 emission factor determined by combining data from drum mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations

PM = Particulate Matter	SO2 = Sulfur Dioxide	CO = Carbon Monoxide	PAH = Polyaromatic Hydrocarbon
PM10 = Particulate Matter (<10 um)	NOx = Nitrous Oxides	HAP = Hazardous Air Pollutant	
PM2.5 = Particulate Matter (< 2.5 um)	VOC - Volatile Organic Compounds	HCl = Hydrogen Chloride	

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from the
Drum-Mix Plant (Dryer/Mixer) Process Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the limited emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	400	ton/hr
Annual Asphalt Production Limitation =	1,000,000	ton/yr

	Emission Factor (lb/ton) Drum-Mix Plant (dryer/mixer)				Limited Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Global Warming Potentials (GWP)	Natural Gas	No. 2 Fuel Oil	Waste Oil	**CO2e for Worst Case Fuel (tons/yr)**
CO2	33	33	33	1	16,500.00	16,500.00	0	**16,626.00**
CH4	0.0120	0.0120	0.0120	21	6.00	6.00	0	
N2O				310	0	0	0	
				Total	16,506.00	16,506.00	0	
				CO2e Equivalent Emissions (tons/yr)	16,626.00	16,626.00	0	

Methodology

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-7 and 11.1-8

There are no emission factors for N20 available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipate from this process.

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (21) + N2O Potential Emission of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CO2 = Carbon Dioxide CH4 = Methane N2O = Nitrogen Dioxide PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Dryer/Mixer Slag Processing

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the limited emissions from the processing of slag in the aggregate drying/mixing

Limited Blast Furnace Slag Usage =	0	ton/yr	0	% sulfur
Limited Annual Steel Slag Usage =	150,000	ton/yr	0.66	% sulfur

Type of Slag	SO2 Emission Factor (lb/ton)	Limited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag*	0.0000	0.0
Steel Slag**	0.0014	0.105

Methodology

* Testing results for blast furnace slag, obtained January 9, 2009 from similar operations at Rieth-Riley Construction Co., Inc. facility located in Valparaiso, IN (permit #127-27075-05241), produced an Emission Factor of 0.54 lb/ton from blast furnace slag containing 1.10% sulfur content. The source has requested a safety factor of 0.20 lb/ton be added to the tested value for use at this location to allow for a sulfur content up to 1.5%.

** Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content.
Limited Potential to Emit SO2 from Slag (tons/yr) = [(Limited Slag Usage (ton/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
Abbreviations
SO2 = Sulfur Dioxide

Appendix A.2: Limited Emissions Summary
Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Location: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate =	2.00	MMBtu/hr	*(2 @ 1.0 MMBtu/hr each)*	
Natural Gas Usage =	18	MMCF/yr		
No. 2 Fuel Oil Usage =	125,143	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	0.017	0.125	**0.13**
PM10/PM2.5	7.6	3.3	0.067	0.206	**0.21**
SO2	0.6	71.0	0.005	4.443	**4.44**
NOx	100	20.0	0.876	1.251	**1.25**
VOC	5.5	0.20	0.048	0.013	**0.05**
CO	84	5.0	0.736	0.313	**0.74**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.8E-06	3.50E-05	**3.5E-05**
Beryllium	1.2E-05	4.2E-04	1.1E-07	2.63E-05	**2.6E-05**
Cadmium	1.1E-03	4.2E-04	9.6E-06	2.63E-05	**2.6E-05**
Chromium	1.4E-03	4.2E-04	1.2E-05	2.63E-05	**2.6E-05**
Cobalt	8.4E-05		7.4E-07		**7.4E-07**
Lead	5.0E-04	1.3E-03	4.4E-06	7.88E-05	**7.9E-05**
Manganese	3.8E-04	8.4E-04	3.3E-06	5.26E-05	**5.3E-05**
Mercury	2.6E-04	4.2E-04	2.3E-06	2.63E-05	**2.6E-05**
Nickel	2.1E-03	4.2E-04	1.8E-05	2.63E-05	**2.6E-05**
Selenium	2.4E-05	2.1E-03	2.1E-07	1.31E-04	**1.3E-04**
Benzene	2.1E-03		1.8E-05		**1.8E-05**
Dichlorobenzene	1.2E-03		1.1E-05		**1.1E-05**
Ethylbenzene					**0**
Formaldehyde	7.5E-02	6.10E-02	6.6E-04	3.82E-03	**0.004**
Hexane	1.8E+00		0.02		**0.016**
Phenol					**0**
Toluene	3.4E-03		3.0E-05		**3.0E-05**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		2.06E-04	**2.1E-04**
		Total HAPs =	**1.7E-02**	**4.5E-03**	**0.020**
		Worst Single HAP =	**1.6E-02**	**3.8E-03**	**1.6E-02**
			(Hexane)	**(Formaldehyde)**	**(Hexane)**

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate =	2.00	MMBtu/hr	*(2 @ 1.0 MMBtu/hr each)*	
Natural Gas Usage =	18	MMCF/yr		
No. 2 Fuel Oil Usage =	125,143	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)
CO2	120,161.84	22,501.41	1	1,052.62	1,407.95
CH4	2.49	0.91	21	0.022	0.057
N2O	2.20	0.26	310	0.019	0.016
			Total	1,052.66	1,408.02
			CO2e Equivalent Emissions (tons/yr)	1,059.05	1,414.19

Worse Case CO2e Emissions (tons/yr)
1,414.19

Methodology

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas : Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from
No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from

Emission Factor (EF) Conversions

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CH4 = Methane
CO2 = Carbon Dioxide
N2O = Nitrogen Dioxide
PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Hot Oil Heating System - Process Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater =	2.00	MMBtu/hr	*(2 @ 1.0 MMBtu/hr each)*
Natural Gas Usage =	18	MMCF/yr, and	
No. 2 Fuel Oil Usage =	125,143	gal/yr	

	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
Criteria Pollutant	Natural Gas (lb/ft3)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	**Worse Case PTE**
VOC	2.60E-08	2.65E-05	2.28E-04	0.002	**0.002**
CO	8.90E-06	0.0012	0.078	0.075	**0.078**
Greenhouse Gas as CO2e*					
CO2	0.20	28.00	1,752.00	1,752.00	**1,752.00**
Hazardous Air Pollutant					
Formaldehyde	2.60E-08	3.50E-06	2.28E-04	2.19E-04	**2.28E-04**
Acenaphthene		5.30E-07		3.32E-05	**3.32E-05**
Acenaphthylene		2.00E-07		1.25E-05	**1.25E-05**
Anthracene		1.80E-07		1.13E-05	**1.13E-05**
Benzo(b)fluoranthene		1.00E-07		6.26E-06	**6.26E-06**
Fluoranthene		4.40E-08		2.75E-06	**2.75E-06**
Fluorene		3.20E-08		2.00E-06	**2.00E-06**
Naphthalene		1.70E-05		1.06E-03	**1.06E-03**
Phenanthrene		4.90E-06		3.07E-04	**3.07E-04**
Pyrene		3.20E-08		2.00E-06	**2.00E-06**
				Total HAPs	**1.67E-03**
				Worst Single HAP	**1.06E-03 (Naphthalene)**

Methodology
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))*(Emission Factor (lb/CF))*(1000000 CF/MMCF)*(ton/2000 lbs)
No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))*(Emission Factor (lb/gal))*(ton/2000 lbs)
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/yr) x CO2 GWP (1)
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

*Note: There are no emission factors for CH4 and N20 available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

Abbreviations
CO = Carbon Monoxide VOC = Volatile Organic Compound CO2 = Carbon Dioxide

Appendix A.2: Limited Emissions Summary
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
RAP Crusher

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Output Horsepower Rating (hp)	0.0
Limited Hours Operated per Year	0
Limited Throughput (hp-hr/yr)	0
Limited Diesel Fuel Usage (gal/yr)	0

Note: The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.

	Pollutant						
	PM[2]	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal[1]	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Limited Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Emission Factor in lb/kgal[4]	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Limited Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Limited Emission of Total HAPs (tons/yr)	**0.00E+00**
Limited Emission of Worst Case HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[6]	N2O[6]
Emission Factor in lb/hp-hr	1.15	NA	NA
Emission Factor in kg/MMBtu	NA	0.003	0.0006
Emission Factor in lb/kgal	22,512.07	0.91	0.18
Limited Emission in tons/yr	0.00	0.000	0.000

[5]The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[6]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Limited Emissions in tons/yr	**0.00**
CO2e Total in tons/yr	**0.00**

Methodology

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours Operated per Year]
Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.2: Limited Emissions Summary
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Output Horsepower Rating (hp)	0.0
Limited Hours Operated per Year	0
Limited Throughput (hp-hr/yr)	0
Limited Diesel Fuel Usage (gal/yr)	0

Sulfur Content (S) of Fuel (% by weight) 0.00

	Pollutant						
	PM	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			0.00E+00 *(.00809S)*	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal[1]	13.70	7.85	7.85	0.00	469.82	13.80	107.67
Limited Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[2]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal[4]	1.06E-01	3.85E-02	2.64E-02	1.08E-02	3.45E-03	1.08E-03	2.91E-02
Limited Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Limited Emission of Total HAPs (tons/yr)	**0.00E+00**
Limited Emission of Worst Case HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[5,6]	N2O[7]
Emission Factor in lb/hp-hr	1.16	6.35E-05	NA
Emission Factor in kg/MMBtu	NA	NA	0.0006
Emission Factor in lb/kgal	22,707.83	1.24	0.18
Limited Emission in tons/yr	0.00	0.00	0.00

[5] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]According to AP-42, Table 3.4-1, TOC (as CH4) is 9% methane by weight. As a result, the lb/hp-hr emission factor for TOC (as CH4) in AP-42 has been multiplied by 9% to determine the portion that is emitted as methane.

[7]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[7]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**0.00**
CO2e Total in tons/yr	**0.00**

Methodology

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours Operated per Year]

Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.

N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the limited fugitive emissions from hot asphalt mix load-out, silo filling, and on-site yard for a drum mix hot mix asphalt plant

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	1,000,000	tons/yr

	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
Pollutant	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Total**
Total PM*	5.2E-04	5.9E-04	NA	0.26	0.29	NA	**0.55**
Organic PM	3.4E-04	2.5E-04	NA	0.17	0.127	NA	**0.30**
TOC	0.004	0.012	0.001	2.08	6.09	0.550	**8.7**
CO	0.001	0.001	3.5E-04	0.67	0.590	0.176	**1.44**

NA = Not Applicable (no AP-42 Emission Factor)

PM/HAPs	**0.012**	**0.014**	**0**	**0.027**
VOC/HAPs	**0.031**	**0.077**	**0.008**	**0.116**
non-VOC/HAPs	**1.6E-04**	**1.6E-05**	**4.2E-05**	**2.2E-04**
non-VOC/non-HAPs	**0.15**	**0.09**	**0.04**	**0.28**

Total VOCs	**1.95**	**6.09**	**0.5**	**8.6**
Total HAPs	**0.04**	**0.09**	**0.008**	**0.14**
			Worst Single HAP	**0.044 (formaldehyde)**

Methodology
The asphalt temperature and volatility factor were provided by the source.
Limited Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::
Total PM/PM10 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)
Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):
PM/PM10 Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)
On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32
*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate
Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Organic Particulate-Based Compounds (Table 11.1-15)

					Speciation Profile		Limited Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**Load-out and Onsite Yard (% by weight of Total Organic PM)**	**Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)**	**Load-out**	**Silo Filling**	**Onsite Yard**	**Total**
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	4.4E-04	6.0E-04	NA	1.0E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	4.8E-05	1.8E-05	NA	6.6E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.2E-04	1.7E-04	NA	2.8E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	3.2E-05	7.1E-05	NA	1.0E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.3E-05	0	NA	1.3E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	3.8E-06	0	NA	3.8E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	3.2E-06	0	NA	3.2E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	3.9E-06	0	NA	3.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.3E-05	1.2E-05	NA	2.5E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.8E-04	2.7E-04	NA	4.4E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	6.3E-07	0	NA	6.3E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	8.5E-05	1.9E-04	NA	2.8E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.3E-03	1.3E-03	NA	2.6E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	8.0E-07	0	NA	8.0E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	4.1E-03	6.7E-03	NA	0.011
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	2.1E-03	2.3E-03	NA	4.4E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	3.8E-05	3.8E-05	NA	7.6E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.4E-03	2.3E-03	NA	3.7E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	2.6E-04	5.6E-04	NA	8.1E-04
Total PAH HAPs							**0.010**	**0.014**	**NA**	**0.025**
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	2.0E-03	0	0	2.0E-03

NA = Not Applicable (no AP-42 Emission Factor)

Methodology
Limited Potential to Emit (tons/yr) = [Speciation Profile (%)] * [Organic PM (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations
PM = Particulate Matter
HAP = Hazardous Air Pollutant
POM = Polycyclic Organic Matter

Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Limited Emissions

Organic Volatile-Based Compounds (Table 11.1-16)

					Speciation Profile		Limited Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**Load-out and Onsite Yard (% by weight of TOC)**	**Silo Filling and Asphalt Storage Tank (% by weight of TOC)**	**Load-out**	**Silo Filling**	**Onsite Yard**	**Total**
VOC		VOC	---	TOC	94%	100%	**1.95**	**6.09**	**0.52**	**8.57**
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.4E-01	1.6E-02	3.6E-02	0.187
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	9.6E-04	3.4E-03	2.5E-04	0.005
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.5E-02	6.7E-02	3.9E-03	0.086
Total non-VOC/non-HAPS					7.30%	1.40%	**0.152**	**0.085**	**0.040**	**0.28**
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.1E-03	1.9E-03	2.9E-04	3.3E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	2.0E-04	3.0E-04	5.3E-05	5.5E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.0E-03	2.4E-03	2.7E-04	3.7E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	2.7E-04	9.7E-04	7.2E-05	1.3E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	4.4E-06	2.4E-04	1.2E-06	2.5E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	3.1E-04	1.4E-03	8.3E-05	1.8E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	2.3E-03	0	6.1E-04	2.9E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	5.8E-03	2.3E-03	1.5E-03	0.010
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	1.8E-03	4.2E-02	4.8E-04	0.044
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	3.1E-03	6.1E-03	8.3E-04	0.010
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	3.7E-05	1.9E-05	9.9E-06	6.6E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	1.6E-05	0	1.6E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	1.5E-04	3.3E-04	4.0E-05	5.2E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.6E-04	0	4.2E-05	2.0E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	4.4E-03	3.8E-03	1.2E-03	0.009
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	2.7E-05	0	7.2E-06	3.4E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	8.5E-03	1.2E-02	2.3E-03	0.023
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.7E-03	3.5E-03	4.4E-04	5.6E-03
Total volatile organic HAPs					1.50%	1.30%	**0.031**	**0.079**	**0.008**	**0.119**

Methodology
Limited Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations
TOC = Total Organic Compounds
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
MTBE = Methyl tert butyl ether

Appendix A.2: Limited Emissions Summary
Material Storage Piles

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Note: Since the emissions from the storage piles are minimal, the limited emissions are equal to the unlimited emissions

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	1.50	0.824	0.288
Limestone	1.6	1.85	1.50	0.507	0.177
RAP	0.5	0.58	1.50	0.158	0.055
Gravel	1.6	1.85	1.50	0.507	0.177
Shingles	0.5	0.58	1.50	0.158	0.055
Slag	3.8	4.40	2.00	1.605	0.562
			Totals	**3.76**	**1.32**

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10

Abbreviations
RAP = recycled asphalt pavement
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Batch or Continuous Drop Operations (AP-42 Section 13.2.4

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where: Ef =	Emission factor	(lb/ton)
k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
Ef (PM) =	2.27E-03	lb PM/ton of material handled
Ef (PM10) =	1.07E-03	lb PM10/ton of material handled
Ef (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

Annual Asphalt Production Limitation =	1,000,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	950,000	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	1.08	0.51	0.08
Front-end loader dumping of materials into feeder bins	1.08	0.51	0.08
Conveyor dropping material into dryer/mixer or batch tower	1.08	0.51	0.08
Total (tons/yr)	**3.23**	**1.53**	**0.23**

Methodology
The percent asphalt cement/binder provided by the source.
Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Limited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additivies
*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 19.2.2)
To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 19.2.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	2.57	1.14
Screening	0.025	0.0087	11.88	4.13
Conveying	0.003	0.0011	1.43	0.52
Limited Potential to Emit (tons/yr) =			**15.87**	**5.80**

Methodology
Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Limited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).
**Assumes PM10 = PM2.5

Abbreviations

PM = Particulate Matter	PM2.5 = Particulate Matter (<2.5 um)
PM10 = Particulate Matter (<10 um)	PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Unpaved Roads

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Annual Asphalt Production Limitation =	1,000,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	950,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	50,000	tons/yr
No. 2 Fuel Oil Limitation =	2,660,632	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	4.2E+04	1.7E+06	1,056	0.200	8,482.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	4.2E+04	7.2E+05	1,056	0.200	8,482.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	1.4E+03	6.7E+04	1,056	0.200	277.8
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.4E+03	1.7E+04	1,056	0.200	277.8
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.8E+02	1.2E+04	1,056	0.200	56.2
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.8E+02	3.4E+03	1,056	0.200	56.2
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	2.3E+05	4.3E+06	1,056	0.200	45,238.1
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	2.3E+05	3.4E+06	1,056	0.200	45,238.1
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	4.2E+04	1.7E+06	1,056	0.200	8,333.3
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	4.2E+04	7.1E+05	1,056	0.200	8,333.3
	Total				**6.2E+05**	**1.3E+07**			**1.2E+05**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.200	miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Roa
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/36
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	6.10	1.55	0.16	lb/mile
Mitigated Emission Factor, Eext =	4.01	1.02	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control pla

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Ful	Dump truck (16 CY)	25.85	6.59	0.66	17.00	4.33	0.43	8.50	2.17	0.22
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	25.85	6.59	0.66	17.00	4.33	0.43	8.50	2.17	0.22
Asphalt Cement/Binder Truck Enter Ful	Tanker truck (6000 gal)	0.847	0.216	0.02	0.557	0.142	1.4E-02	0.278	0.071	7.1E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.847	0.216	0.02	0.557	0.142	1.4E-02	0.278	0.071	7.1E-03
Fuel Oil Truck Enter Ful	Tanker truck (6000 gal)	0.171	0.044	4.4E-03	0.113	0.029	2.9E-03	0.056	0.014	1.4E-03
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.171	0.044	4.4E-03	0.113	0.029	2.9E-03	0.056	0.014	1.4E-03
Aggregate/RAP Loader Full	Front-end loader (3 CY)	137.86	35.14	3.51	90.65	23.10	2.31	45.33	11.55	1.16
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	137.86	35.14	3.51	90.65	23.10	2.31	45.33	11.55	1.16
Asphalt Concrete Truck Leave Ful	Dump truck (16 CY)	25.40	6.47	0.65	16.70	4.26	0.43	8.35	2.13	0.21
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	25.40	6.47	0.65	16.70	4.26	0.43	8.35	2.13	0.21
	Totals	**380.26**	**96.91**	**9.69**	**250.03**	**63.72**	**6.37**	**125.02**	**31.86**	**3.19**

Methodology
Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particulate Matter (<2.5 um) PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Paved Roads
Limited Emissions

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Annual Asphalt Production Limitation =	1,000,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	950,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	50,000	tons/yr
No. 2 Fuel Oil Limitation =	2,660,632	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	4.2E+04	1.7E+06	1,056	0.200	8,482.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	4.2E+04	7.2E+05	1,056	0.200	8,482.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	1.4E+03	6.7E+04	1,056	0.200	277.8
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.4E+03	1.7E+04	1,056	0.200	277.8
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.8E+02	1.2E+04	1,056	0.200	56.2
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.8E+02	3.4E+03	1,056	0.200	56.2
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	2.3E+05	4.3E+06	1,056	0.200	45,238.1
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	2.3E+05	3.4E+06	1,056	0.200	45,238.1
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	4.2E+04	1.7E+06	1,056	0.200	8,333.3
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	4.2E+04	7.1E+05	1,056	0.200	8,333.3
	Total				**6.2E+05**	**1.3E+07**			**1.2E+05**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.200	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.15	0.03	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.14	0.03	0.01	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plar

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Ful	Dump truck (16 CY)	0.63	0.13	0.03	0.58	0.12	0.03	0.29	0.06	0.01
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.63	0.13	0.03	0.58	0.12	0.03	0.29	0.06	0.01
Asphalt Cement/Binder Truck Enter Ful	Tanker truck (6000 gal)	0.021	0.004	1.0E-03	0.019	0.004	9.3E-04	0.009	1.9E-03	4.6E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.021	0.004	1.0E-03	0.019	0.004	9.3E-04	0.009	1.9E-03	4.6E-04
Fuel Oil Truck Enter Ful	Tanker truck (6000 gal)	4.2E-03	8.4E-04	2.1E-04	3.8E-03	7.6E-04	1.9E-04	1.9E-03	3.8E-04	9.4E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	4.2E-03	8.4E-04	2.1E-04	3.8E-03	7.6E-04	1.9E-04	1.9E-03	3.8E-04	9.4E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	3.36	0.67	0.17	3.08	0.62	0.15	1.54	0.31	0.08
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	3.36	0.67	0.17	3.08	0.62	0.15	1.54	0.31	0.08
Asphalt Concrete Truck Leave Ful	Dump truck (16 CY)	0.62	0.12	0.03	0.57	0.11	0.03	0.28	0.06	0.01
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.62	0.12	0.03	0.57	0.11	0.03	0.28	0.06	0.01
	Totals	**9.28**	**1.86**	**0.46**	**8.48**	**1.70**	**0.42**	**4.24**	**0.85**	**0.21**

Methodology
Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %
Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particulate Matter (<2.5 um) PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Cold Mix Asphalt Production and Stockpiles

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Limited VOC Emissions from the Sum of the Liquid Binders = 58.89 tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	VOC Solvent Usage Limitation (tons/yr)	Limited PTE of VOC (tons/yr)	Liquid Binder Adjustment Ratio
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	62.0	58.89	1.053
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	84.1	58.89	1.429
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	235.5	58.89	4.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	126.9	58.89	2.155
Other asphalt with solvent binder	25.9%	2.5%	2355.5	58.89	40.0
Worst Case Limited PTE of VOC =				**58.89**	

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**15.36**	
Limited PTE of Single HAP (tons/yr) =	**5.30**	**Xylenes**

Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents

		Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
Volatile Organic HAP	CAS#	Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	1110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		**26.08%**	**0.33%**	**1.29%**	**0.68%**	**0.19%**
Worst Single HAP		**9.00% Xylenes**	**0.31% Naphthalene**	**0.50% Xylenes**	**0.23% Xylenes**	**0.07% Chrysene**

Methodology
Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]
Limited PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
Limited PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Gasoline Fuel Transfer and Dispensing Operation

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Note: Since the emissions from the gasoline fuel transfer and dispensing operation are minimal, the limited emissions are equal to the unlimited emissions.

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

Gasoline Throughput =	0	gallons/day
=	0.0	kgal/yr

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
Total		**0.00**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**0.00**	
Limited PTE of Single HAP (tons/yr) =	**0.00**	**Xylenes**

Methodology
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

Appendix A.3: Unlimited Potential to Emit of the Revision

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO_2e	Total HAPs	Worst Case HAP	
Ducted Emissions											
Dryer Fuel Combustion - Propane	2.52	2.52	2.52	0.10	65.43	5.03	37.75	64,385.05	0.000	0.000	N/A
Diesel-Fired Generator Fuel Combustion (< 600 HP) (crusher) *	0	0	0	0	0	0	0	0	0	0	N/A
Worst Case Emissions**	**2.52**	**2.52**	**2.52**	**0.10**	**65.43**	**5.03**	**37.75**	**64,385.05**	**0.00**	**0.00**	**N/A**
Fugitive Emissions											
Material Crushing	4.73	2.10	2.10	0	0	0	0	0	0	0	N/A
Material Storage Piles (recycled asphalt shingles (RAS))	0.05	0.02	0.02	0	0	0	0	0	0	0	N/A
Total Fugitive Emissions	**4.78**	**2.12**	**2.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**N/A**
Totals Unlimited/Uncontrolled PTE	**7.30**	**4.64**	**4.64**	**0.10**	**65.43**	**5.03**	**37.75**	**64,385.05**	**0.00**	**0.00**	**N/A**

N/A = not applicable
RAP = recycled asphalt pavement (RAP).
* The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicablilty.
** Worst Case Emissions (tons/yr) = Emissions from Dryer Fuel Combustion (Worst Case Existing vs Propane) + Worst Case Emissions from Hot Oil Heater Fuel Combustion

Appendix A.3: Unlimited Potential to Emit of the Revision
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of propane in the dryer/mixer.

Maximum Capacity

Maximum Fuel Input Rate =	104.0	MMBtu/hr		
Propane Usage =	10,066,740	gal/yr, and	0.20	gr/100 ft3 sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (lb/kgal)	Unlimited/Uncontrolled Potential to Emit (tons/yr)
PM	0.5	2.517
PM10/PM2.5	0.5	2.517
SO2	0.020	0.101
NOx	13.0	65.43
VOC	1.00	5.03
CO	7.5	37.75
Hazardous Air Pollutant		
HCl		
Antimony		
Arsenic		
Beryllium		
Cadmium		
Chromium		
Cobalt		
Lead		
Manganese		
Mercury		
Nickel		
Selenium		
1.1.1-Trichloroethane		
1,3-Butadiene		
Acetaldehyde		
Acrolein		
Benzene		
Bis(2-ethylhexyl)phthalate		
Dichlorobenzene		
Ethylbenzene		
Formaldehyde		
Hexane		
Phenol		
Toluene		
Total PAH Haps		
Polycyclic Organic Matter		
Xylene		
	Total HAPs	**0**

Methodology
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
Sources of AP-42 Emission Factors for fuel combustion:
Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (< 2.5 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.3: Unlimited Potential to Emit of the Revision
Greenhouse Gas (CO2e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer at the source.

Maximum Capacity

Maximum Fuel Input Rate =	104.0	MMBtu/hr		
Propane Usage =	10,066,740	gal/yr, and	0.20	gr/100 ft3 sulfur

Unlimited/Uncontrolled Emissions

CO2e Fraction	Emission Factor (units) Propane (lb/kgal)	Unlimited/ Uncontrolled Potential to Emit (tons/yr) Propane (tons/yr)
CO2	12,500.00	62,917.13
CH4	0.60	3.03
N2O	0.9	4.53
Total	n/a	62,924.69

CO2e Equivalent Emissions (tons/yr)
64,385.05

Global Warming Potentials (GWP)		
Name	Chemical Formula	Global warming potential
Carbon dioxide	CO_2	1
Methane	CH_4	21
Nitrous oxide	N_2O	310

Abbreviations
PTE = Potential to Emit
CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrogen Dioxide
n/a = not applicable

Methodology
Fuel Usage from TSD Appendix A.1, page 1 of 14.
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0915 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.102 MMBtu]
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Propane: Emission Factor for CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, has been converted from kg/mmBtu to lb/kgal. Emission Factors for CO2 and N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1

Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

Emission Factor (EF) Conversions

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Appendix A.3: Unlimited Potential to Emit of the Revision
Material Crushing Emissions
RAP Crusher

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

Material Screening and Conveying (AP-42 Section 11.19.2)
To estimate potential fugitive dust emissions from raw material crushing, and the accompanying screening and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

Maximum Material Throughput = 200 tons/hr

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**
RAP Crushing	0.0054	0.0024	4.73	2.10
			4.73	**2.10**

Methodology
Maximum Material Throughput (tons/hr) = [Maximum Capacity of the Equipment]
Unlimited Potential to Emit (tons/yr) = [Maximum Material Throughput (tons/hr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs] * [8760 hrs/yr]
Raw materials include the following recycled asphalt materials (RAM): recycled asphalt pavement (RAP) and/or recycled asphalt shingles (RAS).
Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).
**Assumes PM10 = PM2.5

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate matter (< 2.5 um)
PTE = Potential to Emit

326 IAC 6-3-2(e) Allowable Rate of Emissions

Operation	Process Rate (lbs/hr)	Process Weight Rate * (tons/hr)	Allowable Emissions (lbs/hr)
RAP Crushing	400,000	200.00	**58.51**

Methodology
* Process weight; weight rate: Total weight of all materials introduced into any source operation (326 IAC 1-2-59(a)).
Allowable Emissions (lb/hr) = 55.0(Process Weight Rate (lb/hr)^0.11 - 40

326 IAC 6-3 Compliance Determination

Operation	Annual PM Emissions (tons/yr)	Conversion Factor	Hourly PM Emission Rate (lbs/hr)
RAP Crushing	4.73	0.23	**1.08**

Methodology
Hourly PM Emission Rate (lbs/hr) = Annual PM Emissions (ton/yr) × Conversion Factor (2000 lbs/ton / 8760 hrs/yr)

Appendix A.3: Unlimited Potential to Emit of the Revision
Material Storage Piles

Company Name: Dave O'Mara Contractor Plant 0233
Source Address: 1110 North Oard Road, Bloomington, Indiana 47404
Permit Number: 105-33049-05234
Reviewer: Hannah L. Desrosiers

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Shingles	0.5	0.58	0.50	0.053	0.018
			Totals	**0.05**	**0.02**

Methodology

PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
RAP = Recycled Asphalt Pavement

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Amy Boswell
Dave O'Mara Contractor Plant 0233
1100 East O & M Ave.
North Vernon, IN 47265

DATE: November 7, 2013

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
FESOP - Significant Permit Revision
105 - 33049 - 05234

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Willis Mack Overton Wilcox Environmental Engineering
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

November 7, 2013

TO: Monroe Co Public Library 303 E Kirkwood Ave Bloomington IN

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Dave O'Mara Contractor Plant 0233
Permit Number: 105 - 33049 - 05234

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: November 7, 2013

RE: Dave O'Mara Contractor Plant 0233 / 105 - 33049 - 05234

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
http://www.in.gov/ai/appfiles/idem-caats/

If you would like to request a paper copy of the permit document, please contact IDEM's central file room at:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Please Note: *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 6/13/2013

Mail Code 61-53

IDEM Staff	LPOGOST 11/7/2013 Dave OMara Contractor Plant 0233 105 - 33049 - 05234 /final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

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2		Monroe Co Public Library 303 E Kirkwood Ave Bloomington IN 47408 *(Library)*									
3		Monroe County Health Department 119 W 7th St Bloomington IN 47404-3989 *(Health Department)*									
4		Bloomington City Council and Mayors Office 401 N. Morton St. Bloomington IN 47402 *(Local Official)*									
5		Mr. Richard Monday 545 E. Margaret Dr. Terre Haute IN 47801 *(Affected Party)*									
6		Monroe County Commissioners Monroe County Courthouse, Room 322 Bloomington IN 47404 *(Local Official)*									
7		Willis Mack Overton Wilcox Environmental Engineering 5757 W. 74th Street Indianapolis IN 46278 *(Consultant)*									
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